

Figure 1A – Visual cortex V1 in C3H rd/rd wild type mice, Ramón-Moliner modification of the Golgi impregnation method. Low-power magnification with the lower density of neurons. The microphotograph was made using the microscope OLYMPUS BX51 with digital camera OLYMPUS DP70.



Figure 1B – Visual cortex V1 in C3H rd/rd wild type mice, Ramón-Moliner modification of the Golgi impregnation method. High-power magnification with the lower density of dendritic spines. The microphotograph was made using the microscope OLYMPUS BX51 with digital camera OLYMPUS DP70.

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Figure 2A – Visual cortex V1 in C3H rd unaffected wild type mice, Ramón-Moliner modification of the Golgi impregnation method. Low-power magnification with normal density of neurons. The microphotograph was made using the microscope OLYMPUS BX51 with digital camera OLYMPUS DP70.



Figure 2B – Visual cortex V1 in C3H rd unaffected wild type mice, Ramón-Moliner modification of the Golgi impregnation method. High-power magnification with higher density of dendritic spines. The microphotograph was made using the microscope OLYMPUS BX51 with digital camera OLYMPUS DP70.



Figure3 – CA1 area of the hippocampus of an experimental animal, staining Hoechst. Degenerating cells with fine segmented nuclei. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.



Figure 4 – CA1 area of the hippocampus of an experimental animal, staining Fluoro-Jade B. Green fluorescence reveals degenerating cells. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.

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Figure 5 – CA3 area of the hippocampus of an experimental animal, staining Hoechst. Degenerating cells with fine segmented nuclei. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.



Figure 6 – CA3 area of the hippocampus of an experimental animal, staining Fluoro-Jade B. Green fluorescence reveals degenerating cells. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.



Figure 7 – Ventral and dorsal blade of the dentate gyrus of an experimental animal, staining Hoechst. Degenerating cells with fine segmented nuclei. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.



Figure 8 – Ventral and dorsal blade of the dentate gyrus of an experimental animal, staining Fluoro-Jade B. Green fluorescence reveals degenerating cells. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.

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Figure 9 – Hippocampus – studied regions: CA1 and CA3 areas of the hippocampus, hilus of the dentate gyrus, DB DG – dorsal blade of the dentate gyrus, VB DG – ventral blades of the dentate gyrus. NADPH-d staining. Direct magnification $40 \times$. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.



Figure 10 – NADPH-d positive neuron in CA1 area of the hippocampus. NADPH-d staining. Direct magnification $400 \times$. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.



Figure 11 – Structurally intact CA1 area of the hippocampus after nicotine application. Fluoro-Jade B staining. Mag. bar = 200 μ m. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.



Figure 12 – Structurally intact neurons in CA1 area of the hippocampus after nicotine application. Hoechst (bisbenzimide) staining. Mag. Bar = 200 μ m. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.

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Figure 13 – Structurally intact CA1 area of the hippocampus after normal saline application. Fluoro-Jade B staining. Mag. bar = 200 μ m. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.



Figure 14 – Structurally intact neurons in CA1 area of the hippocampus after normal saline. Hoechst (bisbenzimide) staining. Mag. Bar = 200 μ m. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.