

Figure 1 – Photomicrographs of NADPHd-positive neurons in the rat hippocampal formation. **A.** In the dentate gyrus, most NADPHd-positive cells are located at the hilar border of the granule cell layer (GL), with fewer in the hilus (H) or inside the granule cell layer. The molecular layer, above the granule cells layer, includes most of the dark-blue puncta that probably represent axon terminals. **B.** In the CA1 area of Ammon's horn most NADPHd-positive cells lie in the strata pyramidale (p) and radiatum (r), but the stratum lacunosum-moleculare (lm) contains the most labelled puncta. Bar = 50  $\mu$ m for **A** and **B**.

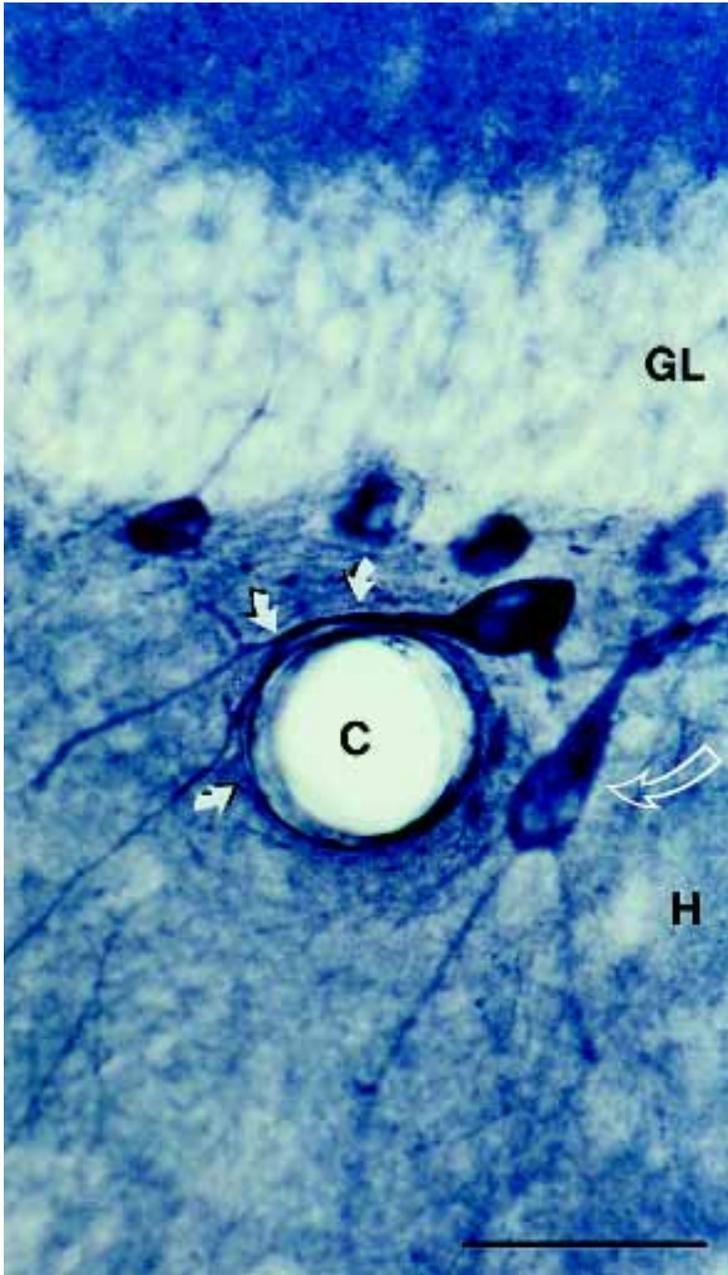


Figure 2 – Photomicrographs of NADPHd-positive cells that display stained dendrites and axons. In the dentate gyrus, dendrites (arrows) of NADPHd-positive cells appear to surround a capillary (C) in the hilus (H), immediately below the granule cell layer (GL), whereas dendrites of another labelled neuron (open arrow) do not have connection with capillaries. The light background staining indicates that the granule cell layer of the dentate gyrus (GL) includes fewer axon terminals than the molecular layer. Bar=20  $\mu$ m.

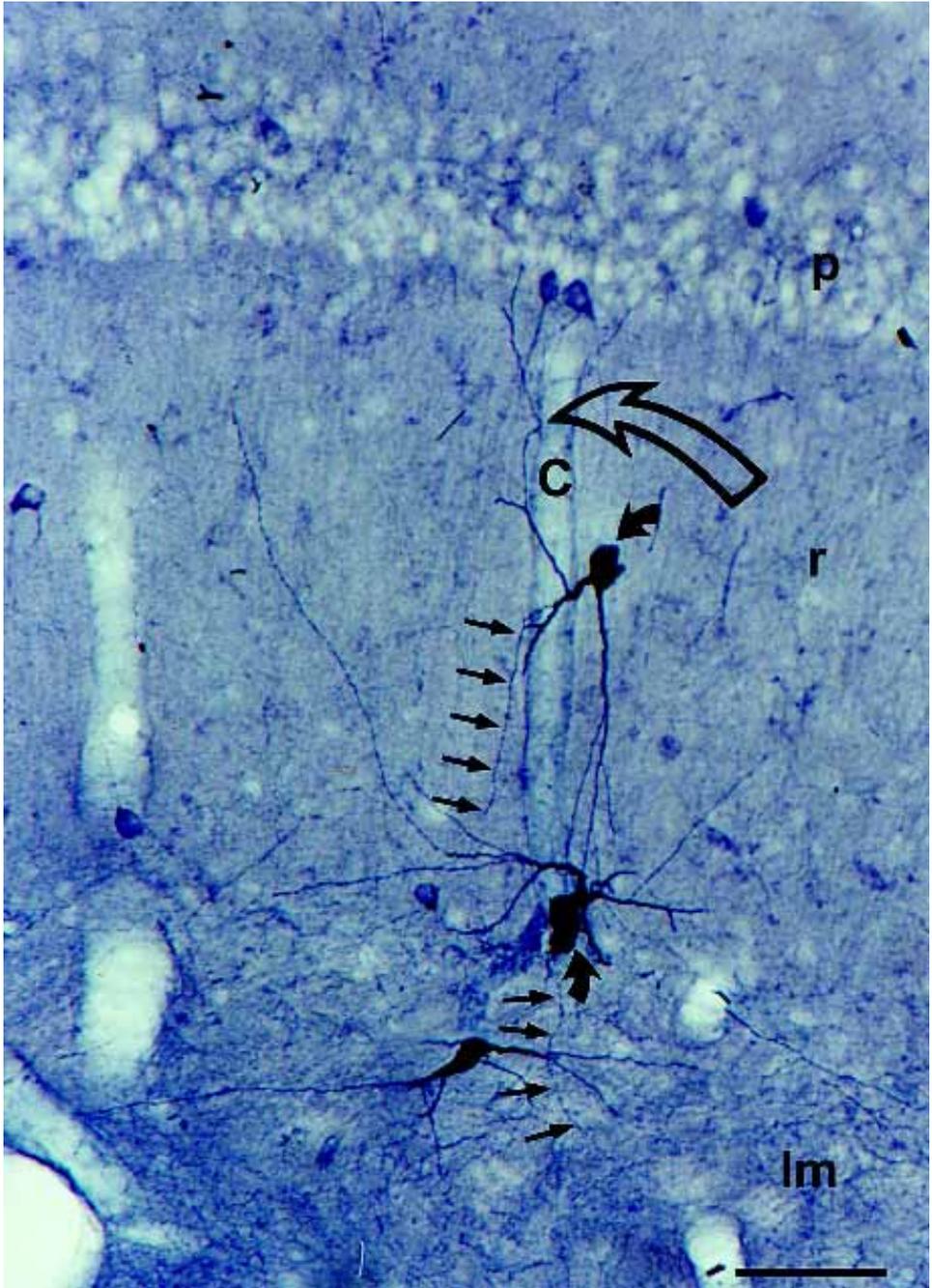
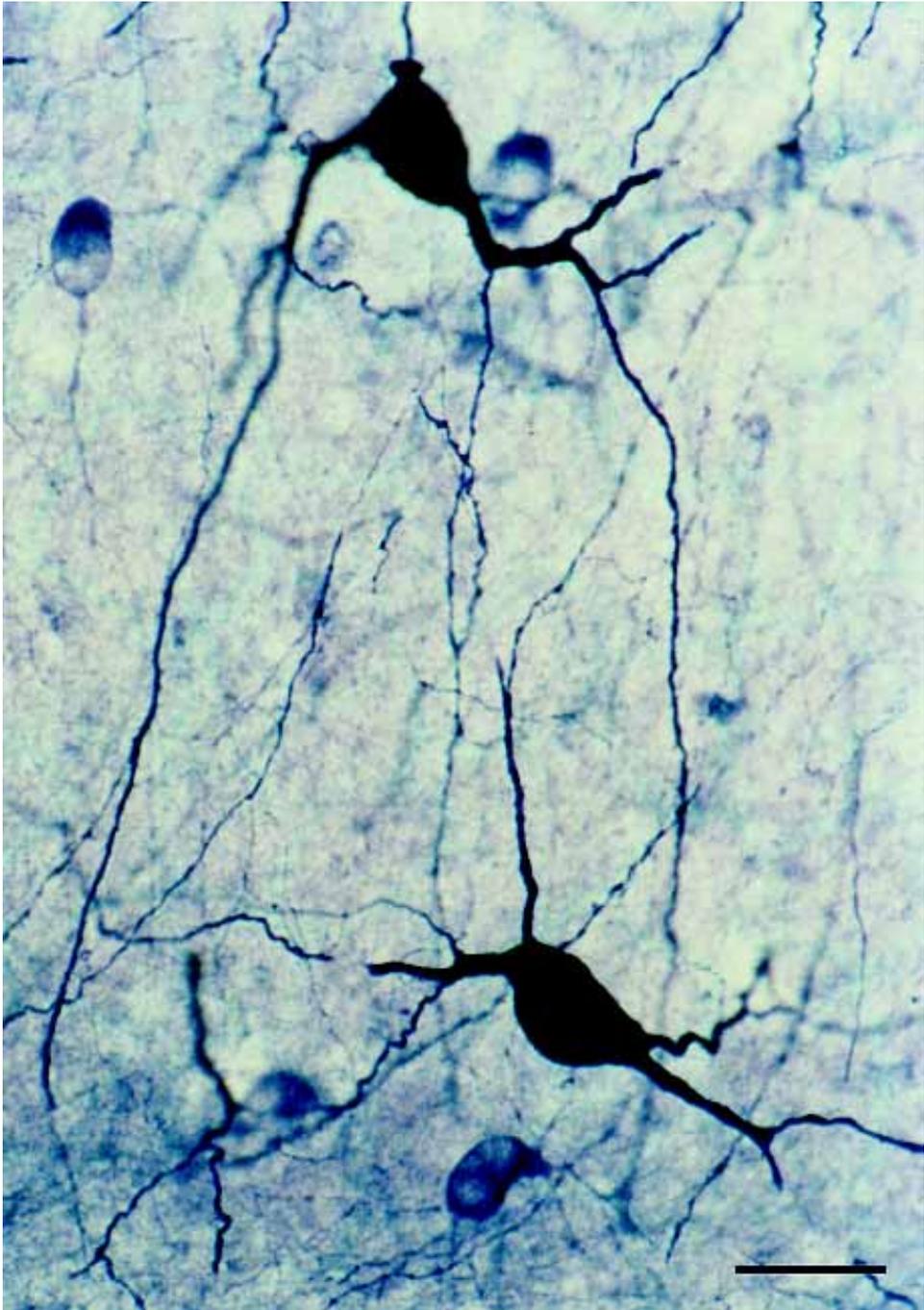


Figure 3 – In the CA1 area of Ammon's horn, somata and dendrites of NADPHd-positive neurons (arrows) are in close contact with a capillary. Dendrites appear to bend (open arrow) to appose a capillary (C). Axons (small arrows) run in the strata radiatum (r) and lacunosum moleculare (lm). The light background staining indicates that the pyramidal cell layer (p) appears to be avoided by axon terminals. Bar=20  $\mu$ m.



*Figure 4 – Photomicrograph of large and small multipolar neurons in the stratum radiatum of CA1 area. Dendrites of the large neurons penetrate both the pyramidal cell layer and the stratum lacunosum-moleculare. Bar=20  $\mu$ m.*

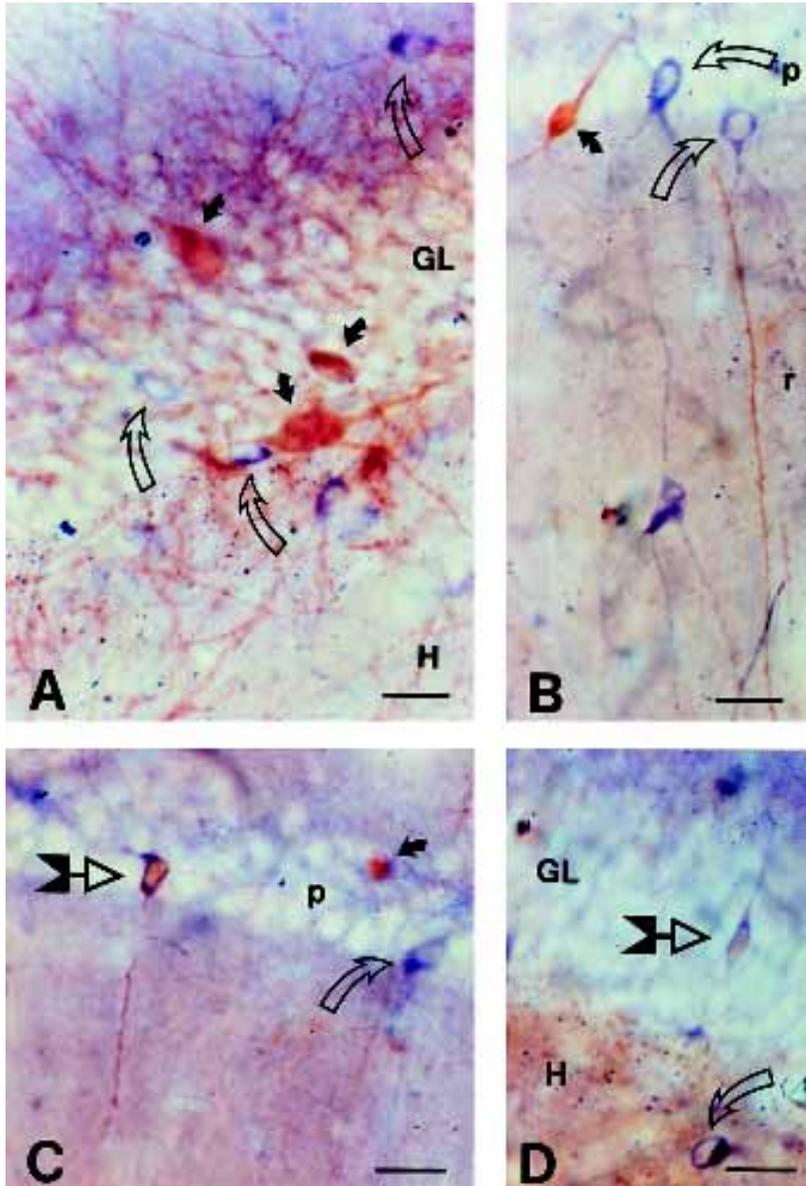


Figure 5 – Photomicrographs of NADPHd (blue) and calcium binding protein-immunoreactive neurons (reddish-brown). **A.** PV-positive neurons (arrows) and NADPHd-positive neurons (open arrows) form separate populations in the granule cell layer (GL), hilus (H) and molecular layer of the dentate gyrus. **B.** In the CA1 area of Ammon's horn CR-positive neurons (arrow) and NADPHd-positive neurons (open arrows) are found in the strata pyramidale (p) and radiatum (r). **C.** In addition to CR-positive (arrow) and NADPHd-positive (open arrow) neurons in the pyramidal cell layer (p) of the CA1 area, a few cells were double labelled for both markers (tailed open arrowhead). **D.** A few NADPHd-positive cells also displayed CR-immunoreactivity (tailed open arrowhead) in the granule cell layer of the dentate gyrus. Open arrow points to an NADPHd-positive but CR-negative neuron in the hilus (H). Bar=20  $\mu$ m for A-D.

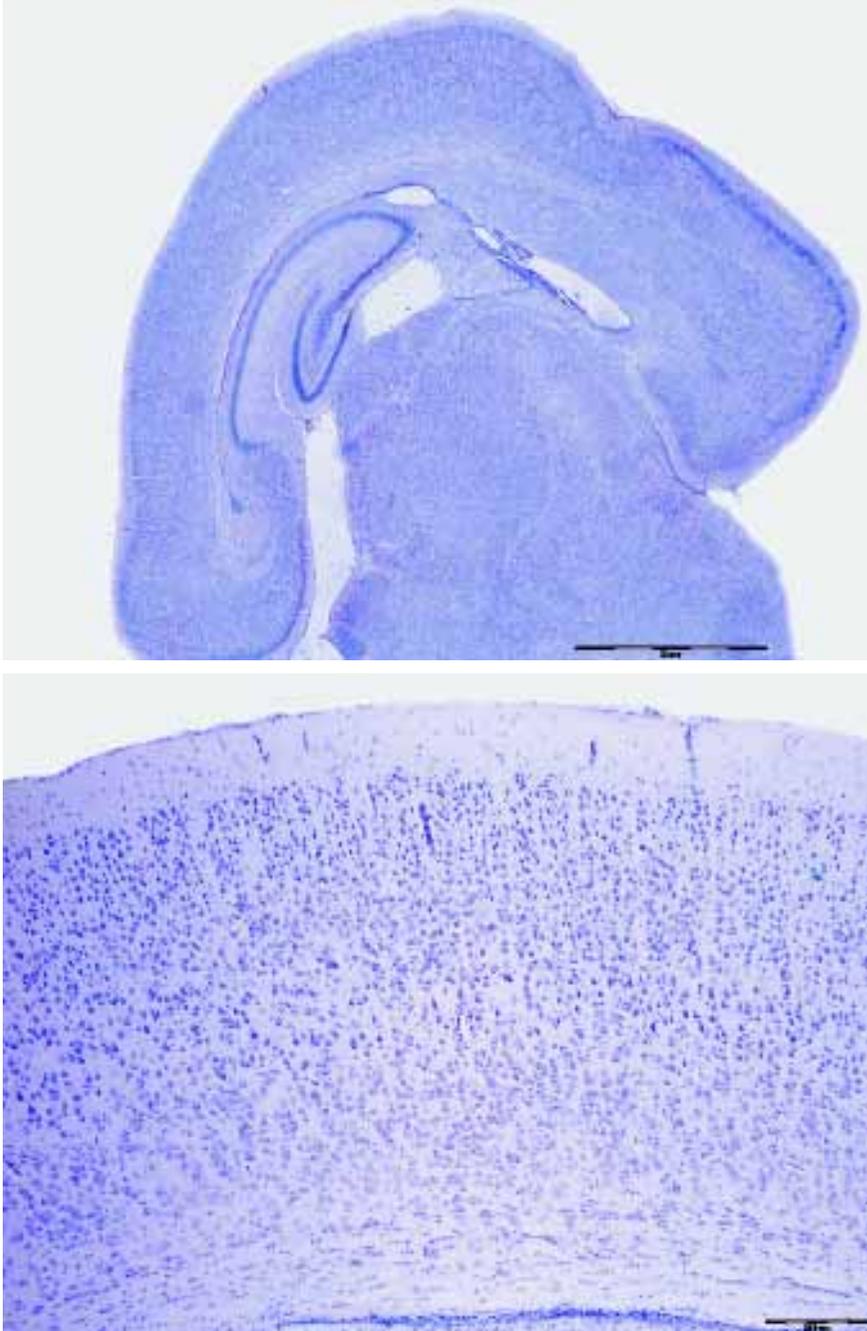
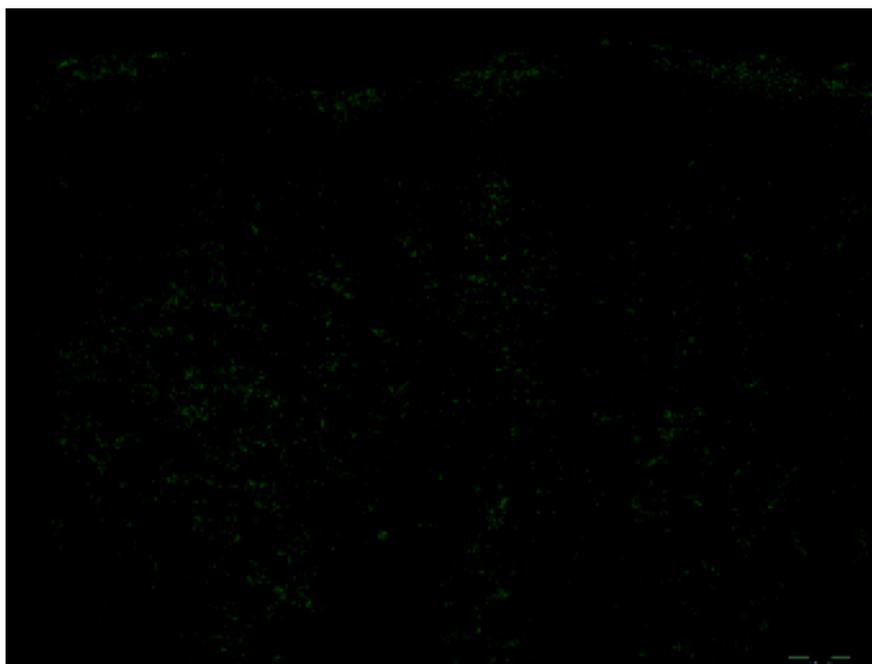
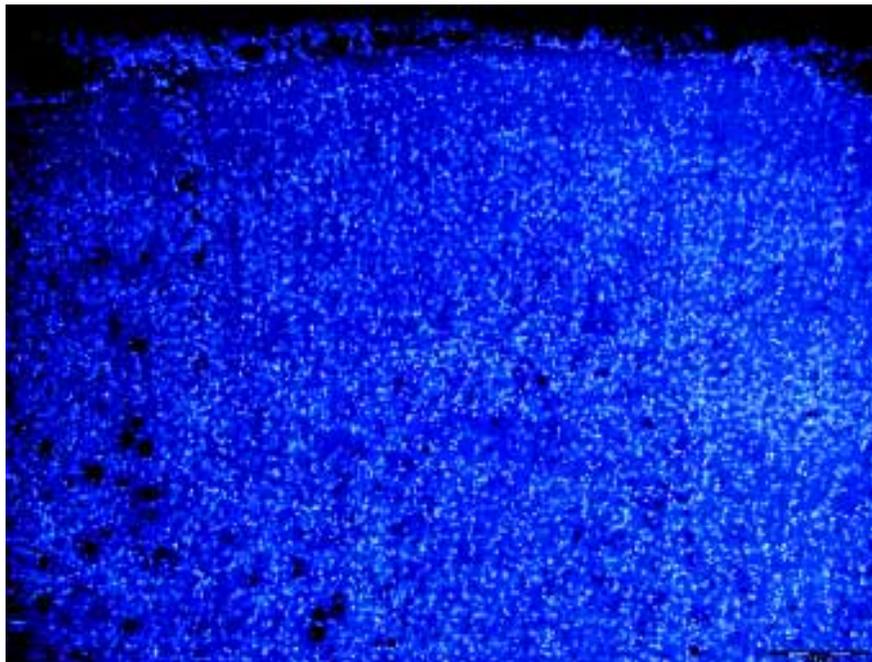


Figure 6a, b – Experimental animal. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.  
a. Coronal section of the rat brain in the AP plane 3 mm posterior to bregma. Nissl staining.  
b. Cortical area in the AP plane 3 mm posterior to bregma. Nissl staining.



*Figure 6c, d – Experimental animal. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.*

*c. Cortical area in the AP plane 3 mm posterior to bregma. Hoechst staining.*

*d. Cortical area in the AP plane 3 mm posterior to bregma. Fluoro-Jade B staining.*

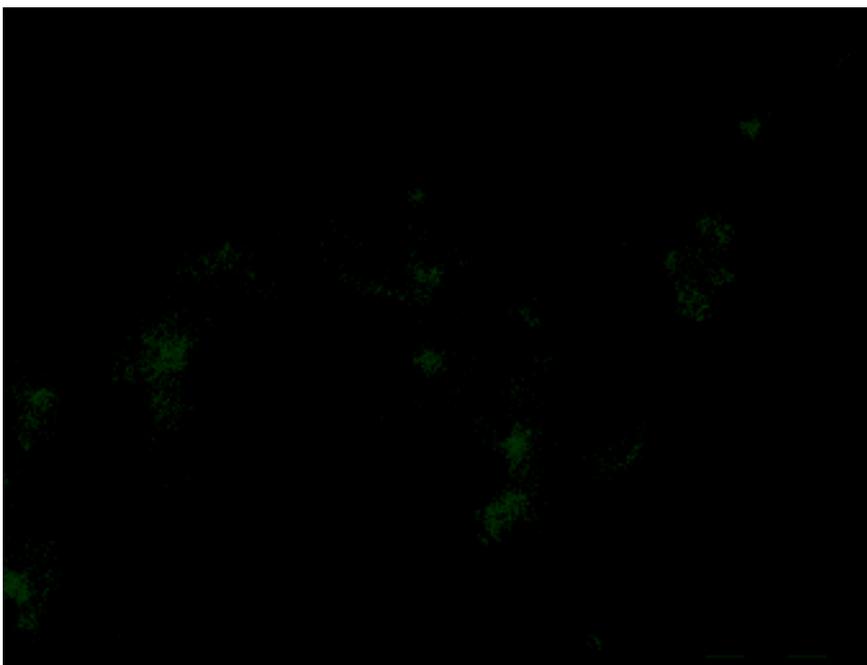
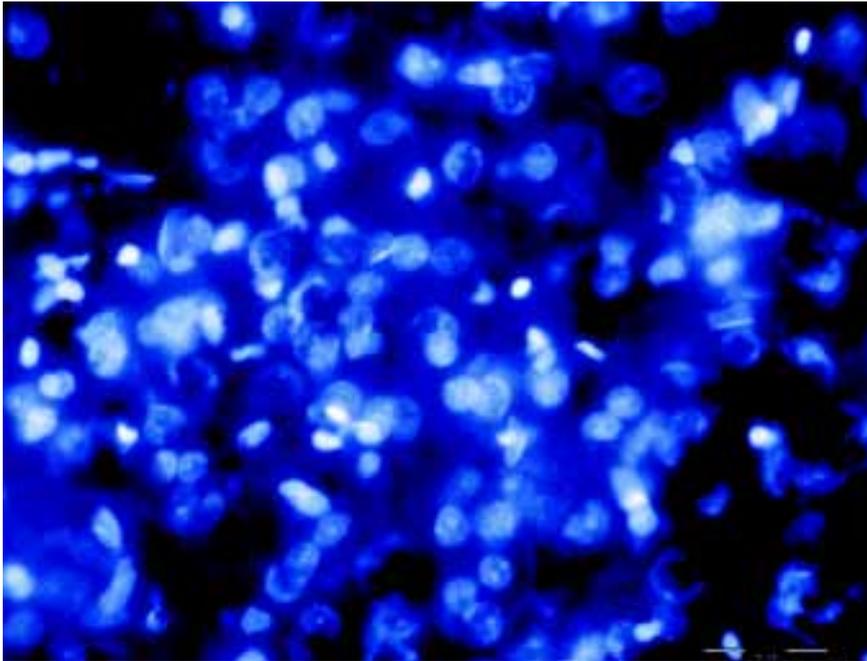


Figure 6e, f – Experimental animal. The microphotograph was made using the microscope OLYMPUS AX70 Provis with digital camera OLYMPUS DP70.

e. Neurons in the V. cortical layer. Hoechst staining.

f. Neurons in the V. cortical layer. Fluoro-Jade B staining.