

# Interhemispheric Structural Asymmetry Induced by a Lateralized Reaching Task in the Rat Motor Cortex

Díaz, Eugenia

Pinto-Hamuy, Teresa

Fernández, Víctor

The effects of a lateralized reaching task on the morphological structure of the rat motor cortex were studied during the early postweaning period. Our results show that the consistent use of one forelimb accounts for a significant decrease in the numerical density of cells and an increase in cortical thickness of the contralateral forelimb motor cortex. As a consequence of the early motor training the cell distribution, which is lower rostrally than caudally in nontrained hemispheres, is reversed in the trained hemispheres. This may be interpreted as the specific motor training triggering a higher neuronal branching in the corresponding cortical region. The present findings may further the understanding of the mechanisms involved in the generation of morphological brain asymmetries. Copyright © 1994, Wiley Blackwell. All rights reserved