

# NADPH diaphorase is developmentally regulated in rat olfactory epithelium

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In vertebrate olfactory receptor neurons, NO synthase (NOS) has been detected in embryonic and early postnatal stages. However, expression of the enzyme in the mature epithelium is still controversial. We analyzed the developmental expression pattern of the histochemical NOS-marker NADPH diaphorase (NADPHd) in the olfactory epithelium of young rats. NADPHd was expressed in a small subset of olfactory receptor neurons as early as P0. Between P0 and P24 the number of labeled neurons increased 10-fold, stabilizing thereafter. Whereas NADPHd was generally found in the somata, a transitory dendritic expression was observed between P2 and P5. This dynamic postnatal regulation of the cellular distribution of NADPHd appears to reflect developmental processes within the olfactory epithelium. © 2001 Lippincott Williams & Wilkins.