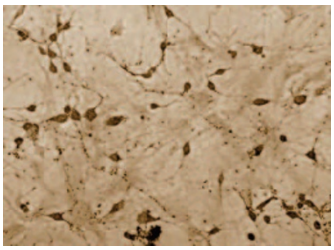
EDITOR'S FOCUS



Activated microglia promote increased numbers of cholinergic neurons and choline acetyltransferase activity from neural progenitor cells. These studies suggest that microglial inflammation during critical stages of development can alter neuronal development.

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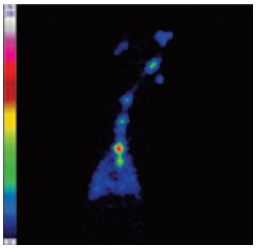

Lung deposition of beclomethasone dipropionate, an example of drug delivery via the airway, was variable in ventilated neonatal piglets and diminished in histologically confirmed acute lung injury or under high pressure ventilation.

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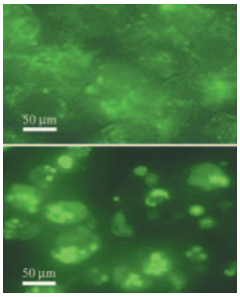

Using Caco-2 cell monolayer model of intestinal barrier and butyrate, the role of short chain fatty acids in maintaining intestinal barrier function was shown. Higher concentrations mimicking overproduction/accumulation in the bowel lumen proved to be cytotoxic disrupting the intestinal barrier as seen in necrotizing enterocolitis.

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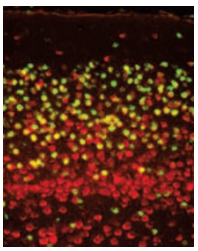

Blockade of monocarboxylate transport in neonatal mouse cortex perturbed neuronal migration, when associated with hypoglycemia this led to neuronal cell death.

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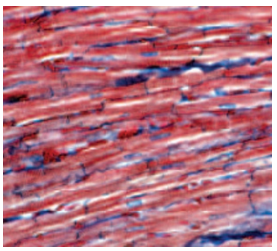

Neonatal dexamethasone therapy consisting of three tapering doses shortened the lifespan by 25% in male and 18% in female rats. Premature death was due to end-stage cardiac and renal failure. This study supports vigilance in the care of young adults that received neonatal glucocorticoid therapy.

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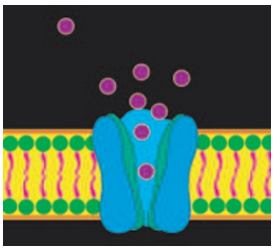

In preterm infants (<30 weeks gestation) the potential difference across nasal epithelium reflecting absorptive airway ion transport capacity was reduced in the first four weeks of life when chronic lung disease developed subsequently. This observation may serve as a predictor for bronchopulmonary dysplasia.

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