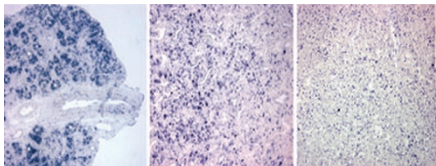


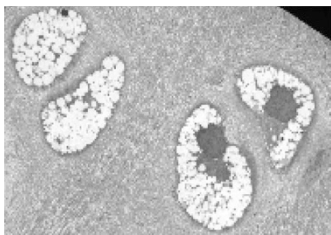
Inducible nitric oxide synthase – derived nitric oxide suppresses human intestinal oxygen consumption ( $VO_2$ ) and demonstrates a relatively normal histology as opposed to necrotizing enterocolitis diseased intestine removed at surgery.

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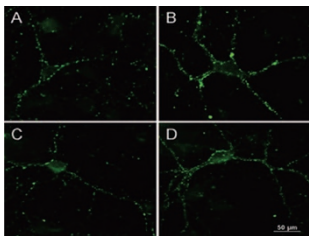
Ghrelin, a strong physiological growth hormone secretagogue, is over expressed in hypoplastic lungs. Exogenous administration of ghrelin to nitrofen-treated dams led to an attenuation of pulmonary hypoplasia through a growth hormone secretagogue receptor 1a (GHSR1a)–independent pathway.

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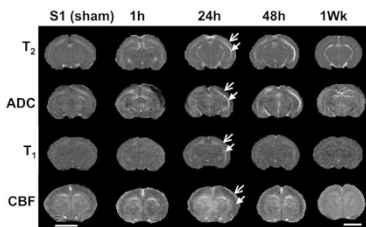
Intra-articular administration of recombinant human N-acetylgalactosamine-4-sulfatase led to clearance of glycosaminoglycans that accumulate in chondrocytes that lasted for 1–2 months prior to re-accumulation in feline mucopolysaccharidosis VI (MPS VI). Localized enzyme replacement therapy is a potential therapy for joint disease in MPS VI.

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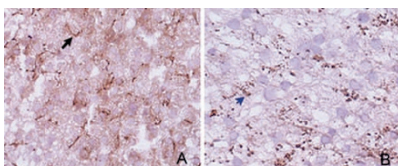
*In vitro* investigations reveal inhibition of synaptogenesis and pyruvate kinase mediated glycolysis by increased concentrations of phenylalanine in primary murine cortical neurons. Reduction of phenylalanine concentrations in phenylketonuria potentially prevents neurodegeneration.

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A combination of quantitative Magnetic Resonance Imaging (MRI) and histological changes examined sequentially following hypoxic-ischemic brain injury demonstrated an increase in apparent diffusion coefficients of water (ADC) and T<sub>2</sub> in association with selective white matter damage. These ADC and T<sub>2</sub> MRI changes normalized subsequently despite increased glial proliferation and reactivity, reduced myelin basic protein and increased cell death. These results suggest that diffuse white matter hyperintensities and increased ADC seen in infants may reflect transient MRI changes post hypoxia-ischemia.

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Investigation of genotype and phenotype correlations in patients with Dubin-Johnson syndrome revealed six novel mutations of the multi-drug-resistance associated protein 2(MRP2) and biphasic pattern of jaundice presenting during the newborn and adolescent stages particularly when the ATP-binding cassette region was involved.

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