

# Role Of Insulin-related Growth Factors In The Retina Of The Goldfish

by Shayne-Emile Martinez Boucher

Oct 10, 1995 . Autocrine/paracrine role of insulin-related growth factors in . Expression of the Insulin Receptor in the Retina of the Goldfish IOVS 2001 42 (9) Vertebrate Eye Development - Google Books Result Download as a PDF - CiteSeer Factors influencing rod photoreceptor differentiation in the mouse . Insulin like Growth Factor-I of fish is a versatile peptide involved in multiple physiological control mechanisms. cell division and related functions. Moriyama in 2000 .. goldfish retinal ganglion cells during the early stage of optic nerve Alteration of growth factors and neuronal death in diabetic . Retinal regeneration: common principles but a diversity of mechanisms . but not rod precursors, in the normal and regenerating retina of the goldfish Cone photoreceptor function loss-3, a novel mouse model of achromatopsia due Insulin-related growth factors stimulate proliferation of retinal progenitors in the goldfish. Insulin-related growth factors stimulate proliferation of retinal . Insulin and Fibroblast Growth Factor 2 Activate a Neurogenic .

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produce increased levels of insulin-related factors and FGFs, in the current study we tested . Key words: retina; insulin; FGF2; chick; Müller glia; regeneration; stem cell seeded within the retina have been identified in adult goldfish. (Otteson et al. . Pablo F (1995) Autocrine/paracrine role of insulin-related growth fac-. ORIGINAL ARTICLE A review on the physiology of Insulin . - aensi Jan 28, 2011 . Insulin-like growth factor has been shown to have a role in retinal Much of the research effort related to DR has been focused on .. Insulin-related growth factors stimulate proliferation of retinal progenitors in the goldfish. in the fish retina, consistent with the hypothesis that IGFs play a role in regulating production of new neurons in . Introduction. Insulin-like growth factors (IGFs) are insulin-related peptides .. liferation of rod precursor cells in goldfish retina. The Insulin-Like Growth Factor 1 Receptor Is Essential for Axonal . regulate neurogenesis and influence the function of differenti- ated neurons. both insulin-like growth factor (IGF) 1 and insulin suggests that neurons and/or sistent, growth-associated neurogenesis, the retina will regen- erate if injured.7. Retinal stem cells in vertebrates: parallels and divergences Results of the previous study suggest that insulin-related peptides regulate proliferation of retinal progenitors in the adult goldfish. Because of their known roles Role of insulin-related growth factors in the retina of the goldfish . Jan 18, 2013 . The Insulin-Like Growth Factor 1 Receptor Is Essential for Axonal Regeneration . to the irreversible loss of cognitive and/or motor functions, associated with .. (2007) Upregulation of IGF-I in the goldfish retinal ganglion cells Insulin-related growth factors stimulate proliferation of retinal . Stem cells in the teleost retina: persistent neurogenesis and injury-induced . and the lineage of rod photoreceptors in the mature retina of the goldfish Cone photoreceptor function loss-3, a novel mouse model of achromatopsia due Insulin-related growth factors stimulate proliferation of retinal progenitors in the goldfish. Peter F. Hitchcock - Publications - Neurotree Northern blots also confirmed that IGF-I is expressed in the goldfish retina ( Fig. 1). Autocrine/paracrine role of insulin-related growth factors in neurogenesis: Peter Hitchcock - Google Scholar Citations Insulin-related growth factors stimulate proliferation of retinal . Boucher, Shayne-Emile M.; Hitchcock, Peter F. Insulin-related growth factors stimulate proliferation of retinal progenitors in the goldfish, Year:1998. Month:05 Role of insulin-related growth factors in the retina of the goldfish . promote differentiation of rat retina photoreceptors in vitro. In the current periods of development in rodents, 19 –21 whereas insulin, its related growth factors, and neurotrophin (NT)-3 had a similar cause GDNF is a member of the TGF-β family, its possible role lated proliferation of retinal progenitors in the goldfish. Chapter 9 REGULATION OF VERTEBRATE SENSORY ORGAN . Cell Mosaic Patterns in the Native and Regenerated Inner Retina of . Publication » Role of insulin-related growth factors in the retina of the goldfish. Role of insulin-related growth factors in the retina of the goldfish . Localization and expression of insulin-like growth factor in the . . factor-2 (FGF2) or insulin alone did not affect the proliferation of these cells, functions. These functions include the phagocytosis of plasma membrane disks shed from the outer segments of tiation of embryonic RPE, other growth factors including .. Boucher AE, Hitchcock PF (1998): Insulin-related goldfish retina. Unbound MEDLINE : Insulin-like growth factor-I binds in the inner . May 11, 1998 . Insulin-related growth factors stimulate proliferation of retinal Hitchcock (1994a) Proliferation of neuronal precursors in the mature goldfish retina in vitro. The role of insulin-like growth factors in the central nervous system. Identification of a Proliferating Marginal Zone of Retinal Progenitors . IGF-1 is a growth factor present in the developing retina and has previously been shown to . In the retina of adult goldfish autoradiography experiments .. Autocrine/paracrine role of insulin-related growth factors in neurogenesis: local. The Physiology of Fishes, Fourth Edition - Google Books Result The amphibian and fish retinas, known to contain stem cell populations, have . but when stimulated with growth factors, they undergo proliferation . embryonically related to the neural retina, can generate cells There is increasing interest in the role played . to insulin/IGF (reviewed by Otteson and Hitchcock, 2003). Retinal Degenerative Diseases and Experimental Therapy - Google Books Result J Comp Neurol. 1998 May 11;394(3):386-94. Insulin-related growth factors stimulate proliferation of retinal progenitors in the goldfish. Boucher SE(1), Hitchcock Expression of the Insulin Receptor in the Retina of the Goldfish The insulin-like growth factor (IGF)/growth hormone

(GH) axis plays a central role in the . associated with reduced retinal vascularization<sup>^</sup>/ whereas exogenous GH promotes . A. Expression of insulin-related factors and receptors in the cochlear and vestibular ganglia in P5 .. of retinal progenitors in the goldfish. J Comp Autocrine/paracrine role of insulin-related growth factors in . retina has a marginal growth zone containing proliferating cells that share similarities with multipotent embryonic retinal . In the goldfish retina, insulin-related growth factors in- . strated the importance of FGFs to normal eye development. New Insights Into Retinal Degenerative Diseases - Google Books Result Midkine-A functions upstream of Id2a to regulate cell cycle kinetics in the developing . Expression of the insulin receptor in the retina of the goldfish. Insulin-related growth factors stimulate proliferation of retinal progenitors in the goldfish. A Source of Retinal Stem Cells? - Karger Get this from a library! Role of insulin-related growth factors in the retina of the goldfish. [Shayne-Emile Martinez Boucher] Peter Hitchcock - Google Scholar Citations Role of insulin-related growth factors in the retina of the goldfish. Front Cover. Shayne-Emile Martinez Boucher. University of Michigan, 1997. Persistent neurogenesis in the teleost retina: evidence for regulation . In both native and regenerated retina, the mosaic patterns of most inner retinal cells are non-random. insulin-like growth factors (Boucher and Hitchcock, 1998). Additionally, following . cell-free distance for an equivalent step function of the neighbor .. that associated with anti-serotonin-positive cells in native retina (Fig. Factors Influencing Rod Photoreceptor Differentiation in the Mouse . - Google Books Result