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Sustainable Aquaculture for a Secure Future

Title: The SoLute Carrier (SLC) Family Series in Teleost Fish

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Abstract: Human genes encoding passive transporters, ion-coupled transporters, and exchangers are all included in the so-called SoLute Carrier (SLC) gene series (the Human Genome Organization Gene Nomenclature Committee; http://www.genenames.org/), consisting of 51 families and at least 378 genes (http://www.bioparadigms.org). Ortholog genes encoding for transport proteins of the SLC series have comparatively been described in teleost fish, although their functional properties, in terms of kinetic parameters, substrate specificities, and inhibition patterns of the expressed transport proteins, have only sporadically been assessed in vitro. This chapter gives the latest updates for the SLC families and their members in teleost fish as well as relevant links to GenBank database and literature. By using a functional genomics approach, a list (version 1.0) of all currently known SLC families in teleost fish is provided in the form of SLC tables.

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