Phylogenetic analysis of the Monogenea and their relationships with Digenea and Eucestoda inferred from 28S rDNA sequences

I. Mollaret, B.G.M. Jamieson, R.D. Adlard, A. Hugall, G. Lecointre, C. Chombard, J.L. Justine. 1997. Molecular and Biochemical Parasitology 90 : 433-438.

Platyhelminth phylogeny is controversial. Phylogenetic analyses of the partial domain C1 and the full domains D1 and C2 (358 nucleotides) from the 28S ribosomal RNA gene for 21 species from the Monogenea, Digenea, Cestoda, and, as the outgroup, Tricladida reveal major departures from prevailing theory. The Digenea and not the Monogenea (Monopisthocotylea and Polyopisthocotylea) form the sister group of the cestodes; the Monopisthocotylea and Polyopisthocotylea are each monophyletic, but the Monogenea do not form a monophylum; the sister group of the Digenea + Cestoda is the Polyopisthocotylea; and Monopisthocotylea are the sister group of all other parasitic flatworms.