

P003 Muscle specific microRNAs in embryonic development
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We have characterised the expression patterns of miR-1, miR-206 and miR-133 in chicken, mouse and *Xenopus* embryos during development and have shown that these microRNAs are expressed exclusively in muscle progenitor cells in somites, limb and head. Regulation of these microRNAs by FGF signalling, both in cell culture and *in vivo*, suggests a role for the basic helix-loop-helix myogenic regulatory factors (MRFs) in their expression. Directed expression of MRFs in the neural tube shows specific roles for these transcription factors in the expression of muscle specific microRNAs. Mouse embryos homozygous for null alleles of either *Myf5* or *MyoD* also show differential effects on microRNA expression. Interestingly analysis of these mice also reveals differences in the regulatory mechanisms driving microRNA expression in trunk and limb muscles. We have also generated vectors for the overexpression of the microRNAs *in vivo* and will present their effects on muscle development during embryogenesis.