PROJECT RESUME

During development limb muscle precursor cells form in somites, delaminate from the hypaxial myotome at limb bud levels, migrate into the limbs and then begin to differentiate. We have shown that expression of myogenic regulators such as MyoD and Myf5 can be induced by FGF and that this activity is repressed by high levels of retinoic acid from the flank. However, RA can also induce myogenic gene expression and it is possible that at lower concentrations it acts along with FGFs to induce myogenesis.

To examine this we will graft beads soaked in various levels of RA into the developing limb buds of chicken embryos and assess their effects on myogenic gene expression using in situ hybridisation and immunostaining. This will provide insights into how these signals act together to control muscle formation during limb development.