Our group takes a comparative approach to developmental biology, using the chicken embryo to study the genetic regulation of organogenesis and disease. Since development occurs outside the maternal body, chicken embryos can be readily accessed and genetically manipulated. Recent technical advances coupled with the sequencing of the chicken genome combine to make the avian embryo a powerful model for functional genomics. Specifically, we study gonadal and limb development. The research in our lab involves both established and cutting edge methods of molecular and developmental biology. We are particularly interested in Evolutionary Developmental Biology (so-called “Evo-Devo”), focusing on how developmental mechanisms have evolved in animals. Both the embryonic gonads and the limbs provide ideal models for exploring questions related to Evo-Devo.

Research Projects

1. **The role of G Protein Coupled Receptor 56 in Müllerian duct development**

2. **Identification of novel genes regulating formation of the Müllerian duct**

3. **ZNF385B: A novel genes involved in gonadal sex differentiation in the chicken embryo**

4. **Comparative analysis of limb morphogenesis in chicken and emu embryos**

Selected significant publications:


