Research Grants in Effect During 2015

* Gene Expression Signatures to Assess Treatment Strategies for Developmental Disorders Using a Conditional/Invertible Mouse Model

* Mechanistic Studies of the Chromosome Axis, a Conserved Structure Central to Recombination and Chromosome Segregation in Meiosis

* Integrating Single-Cell Technologies with Systems Biology Approaches for Dissection of Cell Fate Decisions in Pre-Implantation Embryos

* The International Skeletal Dysplasia Registry

* The Cytoskeleton in Body Axis Establishment

* Defining the FGFR2 Disorder Bent Bone Dysplasia Syndrome as a Ribosomopathy

* Structural Insights Into the Origin Recognition Complex and Meier-gorlin Syndrome

* Innate Immunity in Skeletal Cell Fate Using Human iPS Cells

* Investigating the Role of p53 in CHARGE Syndrome

* Nature vs Nurture: Convergence of Genetic and Environmental Factors in Gene Regulation During Human Craniofacial Development

* Mechanisms of Programmed Neurogenic Hyperphagia and Offspring Obesity

* Mechanisms of Paternal Mitochondria Elimination in Fertilized Embryos of C. Elegans

* Role of Integrin Linked Kinase in Regulating Epithelial Cell Lineage Commitment During Lung Development

* Specialized Arteriole Smooth Muscle Cells: Primed to Muscularize in Pulmonary Hypertension?

* 3D Bioprinting Smart Nanostructured Soft Tissue Graft for Spina Bifida Repair and Neurological Function Recovery

* Identification of Human Mutations Severely Affecting Brain, Eye and Muscle Development

* Mechanism of Phosphatidylinositol-4,5-bisphosphate 5-phosphatase Action on Signaling During Mammalian Development

* A Novel Animal Model for Studying Individual Variability in Susceptibility to Neural Damage and the Ability to Functionally Recover from It

* Understanding the Function of the Cortical Microtubules in the Proliferation of Toxoplasma gondii
Research Grants in Effect During 2015

- Regulation of Pancreatic Beta Cell Development and Regeneration by Alpha Cells
- Cytogenomics of Cardiovascular Malformations Consortium Registry
- Mechanisms of NAD+-mediated Amelioration of Dystrophy in Zebrafish
- Developmental Mechanisms and Treatment of Blinding Early-onset Retinal Degeneration
- Defective RNA Metabolism in Childhood Developmental Syndromes
- Interplays Between ADAR1 and MDA5 in the Pathogenesis of Aicardi-Goutière Syndrome
- Specification and Patterning of the Developing Airway by Cell Polarity-regulated Cues
- Transformative Genetic Testing for Early Detection of Birth Defects
- Intestinal Mucus Barrier: Role in Necrotizing Enterocolitis (NEC) and Prophylactic “Mucus-strengthening” Treatment to Prevent NEC
- KIR2DS1+ NK Cells at the Maternal-Fetal Interface - Controlling Trophoblast Invasion and HCMV Infection
- Role of tRNA Fragments in Paternal Dietary Effects on Offspring Metabolism
- Protection Against Deafness Caused by Hypothyroidism
- The Danforth’s Short Tail Mouse as a Model for Caudal Birth Defects in Humans
- Can Molecular Testing Improve Newborn Screening Performance and Outcomes for Congenital Adrenal Hyperplasia?
- L-leucine as a Potential Therapy for Cornelia de Lange Syndrome
- Genes and Mechanisms of Renal Malformations in Children
- Mechanisms of FGF Signaling in Cochlear Development
- The Intestinal Microbiome in Short Gut Syndrome
- Identification of Genes and Small Molecules to Prevent Maternal Age-Dependent Oocyte Decline and Aneuploidy
- Transcriptional Mechanisms Controlling Cellular Fusion
- Role of the MAP Kinase and Related Pathways in Human Disorders of Gonadal Development
- Right-sided Hyaluronan Synthesis Provides a Mechanism for Asymmetric Left-right Gut Rotation
* Use of Human Pluripotent Stem Cell-Derived Hepatic Cells in Pediatric Liver Transplantation

* Telomere Shortening, Chromosome Nondisjunction and Embryo Aneuploidy

* The Annexin A2 System in Retinopathy of Prematurity

* Role of EGFL7 in Implantation, Placental Development and Pre-eclampsia

* Frizzled2-mediates Canonical Wnt Signaling to Promote Vasculature Formation in the Early Lung

* Mechanisms of Microtubule Regulators in Cilia Formation and Function

* Regulation of Cardiomyocyte Proliferation Dynamics During Zebrafish Heart Development

* Early Language and Functional Expectations (LIFE) Study of Infants and Toddlers with Hearing Loss

* Mechanisms of Retinoic Acid Signaling Induced Congenital Heart Defects

* Pregnancy Induced Maternal Regulatory T Cells

* Epigenetic Regulation of Spermatogenesis By Long Intervening Non-coding (linc) RNAs

* Omega Tots: Polyunsaturated Fatty Acid Supplementation of Toddler Diets to Improve Development and Behavior Outcomes Among Children Born Preterm

* The Role of SHOC1 in Mouse Meiotic Homologous Recombination

* Mechanistic Analysis of Retinoid Deficiency Induced Enteric Nervous System (ENS) Defects

* Regulation of Polycomb Complexes by Noncoding RNAs

* Pre-clinical Evaluation of a Novel Vaccine for Pediatric Falciparum Malaria

* Angptl Receptor Supported Expansion of Cord Blood Stem Cells

* Dissecting Pathways That Regulate Social Behavior in Drosophila Melanogaster

* The Role of RERE in 1p36-Related Cardiovascular Malformations

* Identifying Cortical Microcircuit Abnormalities in a Mouse Model of Autism Spectrum Disorder

* Genetic, Molecular and Cellular Mechanisms Regulating Development of
Research Grants in Effect During 2015

Congenital Diaphragmatic Hernias

* Modeling and Discovering Genes Responsible for Human Omphalocele
* Anesthesia-induced Risks of Cognitive Impairment During Early Development - Mechanism and Prevention
* Construction of Tissues and Organs from Embryoid Bodies Instructed with a Combination of Morphogen Gradients
* Epigenetic Inheritance of a Therapeutic Trait
* Ephrin-B2 Enhances KDR Signaling in Developing Lung
* Elucidating Genetic Contributions to Speech and Language Disorders
* Fetal Factors Protecting From Placental Malaria
* UBE3A Substrates: In Vivo Studies in Mice for Angelman and Dup15q Syndromes