

Biomedical Piglet Consortium

USDA/ARS Children's Nutrition Research Center · Baylor College of Medicine

Translational swine models advancing pediatric & adult biomedical research

\$30M+

Federal & industry grants secured

60+ yrs

Combined swine research experience

30 yrs

Pioneering neonatal pig models

ESTABLISHED SWINE MODELS

Preterm Piglet

~30 wks gestation equivalent
Prematurity complication studies

Term Piglet

Normal neonatal development
Nutrition & disease states

Juvenile Pig (5–10 kg)

Post-neonatal pre-adolescent intermediate model

RESEARCH AREAS

Prematurity & Perinatal Biology

Systemic impacts of premature birth, glucocorticoid signaling

Nutrition & Metabolism

Dietary nutrient availability, choline metabolism in preterm neonates

GI Nutrient Absorption

Arterial-portal venous balance, stable isotope tracers for AA & glucose

GI Pathophysiology

NEC, biliary atresia / cholestatic liver disease, PNALD

Systemic Inflammation

Sepsis modeling and systemic inflammatory response studies

Cellular Model Development

Human & porcine intestinal, hepatic, and immune cell systems

INFRASTRUCTURE & TECHNICAL SERVICES

Specialized Infrastructure

Neonatal & juvenile animal housing
Surgical suites for complex procedures
Telemetry monitoring systems
Enteral & total parenteral nutrition delivery
Stable isotope tracer analysis
DEXA body composition instrumentation
Veterinary & clinical support staff

Technical Services

Formula, milk replacer & PN evaluation
Pharmaceutical efficacy & tolerance testing
Medical device surgical assessment
Study design & protocol development
Data analysis & interpretation
Collaborative industry partnerships