



Jack Odle



Nutritional Biochemistry of the Developing Neonate

Research emphasis:

Molecular and metabolic regulation of lipid digestion and metabolism; neonatal nutrition; intestinal growth and metabolism and health in normal and pathophysiological states.

Application:

- Pig model of infant nutrition
- Improved gut health
- Reduced neonatal morbidity and mortality

Dr. Odle's research program is focused primarily on the "Nutritional Biochemistry of the Neonate." His laboratory utilizes piglets as a model for the human infant and examines problems relevant to both production agriculture and medical science.

Collaboration potential:

- Nutrition & gut health
- Pediatric applications
- Fatty acid metabolism
- Biotechnology
- Swine nutrition
- Microbiome

Selected publications:

Jacobi, S.K., T. Yatsunencko, D. Li, S. Dasgupta, R.K. Yu, B. Berg, M. Chichlowski and J. Odle. 2016. Dietary isomers of sialyllactose increase ganglioside sialic acid concentrations in the corpus callosum and cerebellum and modulate the colonic microbiota of formula-fed piglets. *J. Nutr.* doi: 10.3945/jn.115.220152

Odle, J., X. Lin, S.K. Jacobi, S.W. Kim and C.H. Stahl. 2014. The suckling piglet as an agrimedical model for the study of pediatric nutrition and metabolism. *Ann. Rev. Anim. Biosci.* 2:414-444. Authors, Title, publication(s) and dates

Price, K.L., X. Lin, E. van Heugten, R. Odle, G. Willis and J. Odle. 2013. Diet physical form, fatty acid chain length, and emulsification alter fat utilization and growth of newly weaned pigs. *J. Anim. Sci.* 91: 783-792.

Jacobi, S.K., A.J. Moeser, A.T. Bliklager, J.M. Rhoads, B.A. Corl, R.J. Harrell, R.J. and J. Odle. 2013. Acute effects of rotavirus and malnutrition on intestinal barrier function in neonatal piglets. *World J. Gastroenterol.* 19: 5094-5102.

William Neal Reynolds
Distinguished Professor
of Nutritional Biochemistry

Ph.D., 1989, University of
Wisconsin-Madison
M.S., 1985, University of
Wisconsin-Madison
B.S., 1982, Purdue University

Address:
101 Polk Hall, 120 Broughton Dr.
Department of Animal Science
Raleigh, NC 27695

Phone: 919-515-4050
Email: jodle@ncsu.edu

<http://jackodle.wix.com/labage>