



## Workshop Agenda:

### October 29, 2004 (Friday):

**Noon-5:00 pm** Registration and assignment to Panel Discussion Groups 1, 2 or 3.  
Coordinators: Kathy Lau and Janet Ireland

**5:00-6:30 pm** **Session I: Welcome to Michigan State University and keynote address:** *Chairs: Dr. Mark Mirando (USDA-CSREES), Dr. Lou DePaolo (NICHD)*

**5:00-5:30 pm** **Welcome**  
  
Dr. Lou Anna K. Simon, Provost and President-Designate,  
Michigan State University

**5:30-6:30 pm** **Keynote address**  
  
**Are the Domestic Farm Species Redundant as Models in Biomedical Research? Does Mighty Mouse Rule Supreme?**  
Dr. R. Michael [Roberts](#), University of Missouri

**6:30-7:30 pm** Cash bar and hors d'oeuvres  
**7:30-9:00 pm** Dinner  
**Welcome to Michigan State University**, Dr. Jeffrey Armstrong,  
Dean, College of Agriculture and Natural Resources, MSU

### October 30, 2004 (Saturday):

**6:30-8:00 am** Continental breakfast

**8:00-10:00 am** **Session II: Reproductive Physiology & Developmental Biology:** *Chairs: Dr. Debora Hamernik (USDA-CSREES) and Dr. Lou DePaolo (NICHD)*

**Speakers:**

**Prenatal programming of reproductive and metabolic dysfunction: the sheep as a model**

Dr. Vasantha [Padmanabhan](#), University of Michigan

**The Chicken - A valuable model for investigations in reproductive biology and reproductive diseases**

Dr. Janice [Bahr](#), University of Illinois

**Swine as biomedical models**

Dr. Randy [Prather](#), University of Missouri

**10:00-10:15 am**

Break and refreshments

**10:15-12:15 pm**      **Session III: Health and Disease:** *Chairs: Dr. Bradley Fenwick (Vice President for Research, Virginia Polytechnic Institute and University) and Dr. John Baker (Interim Director, Agricultural Experiment Station, Michigan State University)*

**Speakers:**

**Use of cattle to study the immunobiology of  $\gamma\delta$  T cells**

Dr. Mark [Jutila](#), Montana State University

**Understanding pathogen transmission in emerging infectious disease**

Dr. [Guy Palmer](#), Washington State University

**Porcine models in the study of cardiovascular effects of exercise in health and disease**

Dr. Harold [Laughlin](#), University of Missouri

**12:15–1:00 pm**

Lunch

**1:00-3:00 pm**

**Session IV: Advanced Technology and Genomics:** *Chairs: Dr. Daniel Schmoltdt (USDA-CSREES), and Dr. Paul Coussens (Michigan State University)*

**Speakers:**

**Microbial pathogenomics**

Dr. Vivek [Kapur](#), University of Minnesota

**New approaches to the prevention of sudden cardiac death: validation in canine and porcine models**

Dr. Robert [Gilmour](#), Jr., Cornell University

**Nuclear transfer cloning of cattle: a model system for studying the genomic biology of totipotent stem cells**

[Dr. Harris Lewin](#), University of Illinois

**3:00-3:15 pm**

Break and refreshments

**3:15–5:15 pm**

**Session V: Nutrition:** *Moderators: Dr. Etta Saltos (USDA-CSREES) and Dr. Pam Starke-Reed (NIH, DNRC)*

**Speakers:**

**The pig and sheep as animal models for nutrition research**

Dr. Guyao [Wu](#), Texas A&M University

**Nutritional biochemistry of the developing neonate: Insights gleaned from a piglet model**

Dr. Jack [Odle](#), North Carolina State University

**Pre- and post-natal influences on adipose tissue development and metabolism: the pig as a model**

Dr. Dorothy [Hausman](#), University of Georgia, Athens

**5:30-7:00 pm**

Dinner

**7:00–9:00 pm**

**Multiple Breakout Sessions I:** *Moderators: Group 1 – Dr. Debora Hamernik (USDA); Group 2 – Dr. Fuller Bazer (Texas A & M); Group 3 – Dr. Louis DePaolo (NICHD)*

**Questions to address:**

- What are the important research areas in human health not identified by speakers that could be advanced by use of domestic species as biomedical models?
- Are there any real or perceived “barriers” using domestic species as models for biomedical research?
- In what ways will the new knowledge generated during the genomics era of research in digestive, reproductive, immune, and other systems benefit both animal agriculture and human medicine?

- Is justification for use of domestic animals as models for biomedical research more difficult compared with rodent models? If so, why?

**9:00-11:00 pm** Social and cash bar

### **October 31, 2004 (Sunday):**

**6:30-8:00 am** Continental breakfast

**8:00-10:00 am** **Multiple Breakout Sessions II:** *Moderators: Group 1 – Dr. Debora Hamernik (USDA); Group 2 – Dr. Fuller Bazer (Texas A & M); Group 3 – Dr. Louis DePaolo (NICHD)*

### **Questions to address:**

- What is needed to enhance the use of domestic species as biomedical models? For example, in the current funding systems, what processes should be kept, discarded, or created to enhance the use of domestic animals as biomedical models? What would the future look like if the use of domestic species for biomedical research were not enhanced?
- What is the desired (and realistic) outcome/expectation for the use of domestic animals as biomedical models? What are the major constraints/barriers to achieving these goals?
- Should strategies to address the issues raised in Question 1 (Breakout Session II) be developed, and if they are developed, such as in a “white paper”, what is the likelihood that they will enhance use of domestic species as biomedical models by 2010? Who will develop and implement these strategies?
- How could greater cooperation between medical schools and animal science departments to use domestic species as biomedical models be fostered?

**10:00-10:30 am** Break and refreshments

**10:30–12:30 pm** **Final Workshop Summary and Planning Session.** *Chairs: Dr. Michael Roberts, University of Missouri; Dr. Bradley Fenwick, Virginia Polytechnic Institute and State University*

Moderators from each group will present summary of results of  
Breakout Sessions I and II

Open for any questions/issues

**12:30 pm**

Adjourn