



USDA-ARS, Livestock Behavior Research Unit,
Poultry Science Building,
Purdue University,
125 S. Russell St.,
West Lafayette,
IN 47907, U.S.A.



MS or PhD studentship on stress and Salmonella infection in swine

We are seeking a high-caliber student to conduct MS or PhD research on stress and Salmonella infection in swine. Three disciplines - stress physiology, ethology, and bacteriology - will be employed to identify individual animals and production practices which place our food supply at risk. Pathogens such as *E. coli* and *Salmonella* are often prevalent in livestock herds across the United States. This reservoir of pathogens is a constant threat to the health of the American public. This threat is compounded when animals are shipped to slaughter because the stress of handling and transportation increases the shedding of these organisms, thereby increasing the chance of contaminating meat products. Our research will tie together the biology of stress with the biology of pathogen infection to provide an understanding of the interaction between livestock stress and pathogen biology that will enable the threat of preharvest food safety to be minimized. Therefore, our objectives are to: 1) Identify physiological, immunological, endocrinological and gastrointestinal-microbiological alterations that occur in infected livestock when subjected to common managerial stressors; and 2) Understand how handling and transportation stress influence livestock pathogens that have the potential to detrimentally affect human health. An understanding of the interaction between livestock stress and pathogen biology will enable the threat of pathogen contamination of our food supply to be minimized.

The student will be registered in the Department of Animal Sciences, Purdue University. The 2 year post and would be suitable for a graduate in biological/animal science or veterinary science. The position is open in May for early applicants; otherwise the position will start in August.

Further details can be obtained from the supervising scientist listed below. Formal expressions of interest should include:

- Personal details (including contact information)
- Academic history (including transcripts and any manuscripts submitted or published)
- Employment history
- Details of other notable achievements
- Why you are interested in conducting research for an MS or PhD
- Names and contact details of three referees

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The closing date for applications is 15th April 2008