

## PORK SAFETY

**Title:** Survey of swine isolates for the presence/absence of resistance integrons  
**NPB #98-217**

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### Abstract

A survey of the antibiotic resistance genes present in environmental and animal associated samples was conducted. Both culturable organisms and the genetic pool were sampled by standard microbiological methods and direct PCR respectively. Organisms resistant to a number of different antibiotics were recovered from both environmental and animal associated samples. In addition, sequences were recovered directly from environmental samples without culturing. The antibiotic resistance genes identified were associated with integrons found to be homologous to beta-lactamase, aminoglycoside transferase and chloramphenicol acyl transferase genes. Some genes recovered especially from *E. coli* had significant homology to resistance genes found in *Salmonella* DT104, suggesting that intragenus transfer had occurred. The mechanism promoting this transfer is not clear from the limited study conducted to date.

*These research results were submitted in fulfillment of checkoff funded research projects. This report is published directly as submitted by the project's principal investigator. This report has not been peer reviewed*

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