Abstract
Most antibiotics sold in the US each year are given to food animals, primarily for the purpose of making animals grow faster. However, it is thought that this practice may be leading to the evolution of antibiotic-resistant pathogens, such as the bacteria Staphylococcus aureus, that could potentially cause disease in humans. This seminar will describe results from recent studies of antibiotic-resistant S. aureus exposure among livestock workers in North Carolina, a leading producer of industrially-raised pigs and poultry. Results from a 2011 cross-sectional study and a 2012 repeated-measures study suggest that not only are livestock-associated, antibiotic-resistant strains of S. aureus present in the noses of industrial workers and their household members, but that these bacteria may persist in workers’ noses even after up to four days away from work. Overall, these findings support concerns that routine subtherapeutic administration of antibiotics in industrial food animal production may contribute to the emergence of antibiotic-resistant S. aureus that can disseminate from animals to humans.