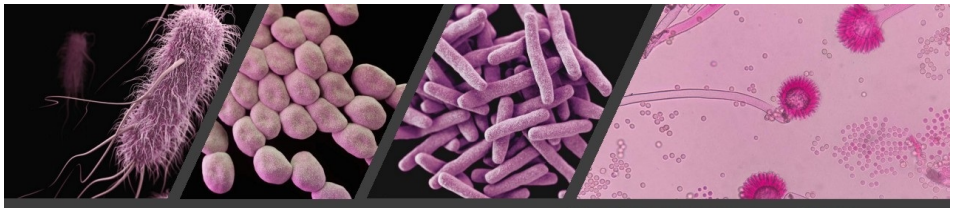

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EVIDENCE AND SPREAD OF MULTIDRUG-RESISTANT ACINETOBACTER SPP. IN FARM ANIMALS AND ENVIRONMENT UNDER A ONE HEALTH PERSPECTIVE

Friday 12 September 2025 10:00 (15 minutes)

This study aimed to address the knowledge gap on *Acinetobacter calcoaceticus–baumannii* (ACB) and non-ACB complex species in farm animals by: -investigating the occurrence of multidrug-resistant (MDR) strains in animals, operators, and the farm environment; -assessing their potential role in transmission within a One Health framework.

From cattle, horses, sheep, goats, pigs, poultry, human hands, and farm environment, samples were collected. Isolates were identified via culture and MALDI-ToF MS. Antibiotic susceptibility was assessed using E-test and Kirby-Bauer methods.

From 840 samples, 128 *Acinetobacter* strains (ACB: 10.2%, 13/128; and 18 different non-ACB complex: 89.8%, 115/128) were isolated in farm animals (83.6%), humans (13.3%), and environment (3.1%). ACB strains were more frequent in diseased animals (P=0.0028), particularly cattle (P=0.0002), where a high proportion of *A. baumannii* (81.8%, 9/11) was significantly identified. Both ACB (92.3%) and non-ACB strains (46.1%, P=0.0016) showed MDR profile that was significantly associated to carbapenem resistance (3.9%; P=0.029, Cramer's V=0.235, Lambda=0.095±SE 0.074). Non-ACB strains showed polymyxin (1.7%) and aminoglycoside resistance (11.3%). Isolates from animals, humans, and the environment shared identical MDR profiles.

Farm animals and their environments may act as reservoirs for MDR *Acinetobacter* spp., supporting the need for further research on transmission dynamics in a One Health context.

Keywords

Acinetobacter calcoaceticus–baumannii (ACB) complex, Acinetobacter spp. non-ACB complex, farm animals, antimicrobial resistance, One Health

Registration ID

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Professional Status of the submitter, who is also the speaker

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Session Classification: AMR: Transmission - Spread - Envirnoment

Track Classification: Antimictobial Resistance