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## Research

Antimicrobial resistance is a matter of great concern worldwide. Our research is focusing on the prevalence and mechanisms of antimicrobial resistance in the hope to prevent the widespread of multidrug-resistant bacteria in Taiwan. We investigated the prevalence of  $\beta$ -lactamases in gram-negative bacilli in Taiwan in the past decade. A number of  $\beta$ -lactamases conferring resistance to extended-spectrum  $\beta$ -lactams were identified by us for the first time in Taiwan. We also detected firstly in Taiwan the resistance determinant in extended-spectrum  $\beta$ -lactam-resistant salmonellae, the spread of which may become a serious thread to the public, and has established a link between food animal husbandry and healthcare settings regarding the spread of the resistance determinant. Recently, the increasing prevalence and complexity of carbapenems-resistant enterobacteria in Taiwan were noticed. A combination of the production of  $\beta$ -lactamases and other mechanisms may be responsible for carbapenems resistance. We are undergoing continuous surveillance of antimicrobial resistance and is extending their study on the resistance mechanisms other than the production of  $\beta$ -lactamases, mechanisms of carbapenems resistance in particular.