

## บทคัดย่อภาษาอังกฤษ

The aim of this study was to investigate, in vitro, the effects of selected antimicrobial drugs on spontaneous contractility as well as prostaglandin F<sub>2α</sub> (PGF<sub>2α</sub>) and oxytocin-induced contractility of the non-pregnant pig uterus. Myometrial strips were isolated from non-pregnant pigs and suspended in a jacketed organ bath filled with Krebs solution at 37 degrees C (pH 7.4) continuously bubbled with 100% oxygen. Isometric contractions were recorded by using isometric force displacement transducer. After manifestation of the spontaneous contractions during equilibration period the test substances PGF<sub>2α</sub> (1 μM), oxytocin (1 μM) and antimicrobial drugs (300-500 nM) were added to the bath. The effects of antimicrobial drugs on amplitude and frequency of spontaneous and the agonist-induced contractions were evaluated by 20 min intervals. Data were statistically analyzed using the Student's t-test. P<0.05 was considered to be significant. Findings showed that by including all antimicrobial drugs gentamicin sulfate, trimethoprim, streptomycin, penicillin, tetracycline could alter myometrial contraction (frequency, amplitude, area under the contraction) arising spontaneously or by agonist stimulation. The effects of these antimicrobial drugs can be both negative and positive effects. The results raise the importance of drug selection for reproductive management in pigs.

**Key words:** swine, antimicrobial drugs, uterus, contraction