Intramammary challenge of lipopolysaccharide stimulates secretion of lingual antimicrobial peptide into milk of dairy cows. By Isobe et al., page 6046. Lingual antimicrobial peptide (LAP), a member of the beta-defensin family in the cow, shows antimicrobial activity against a wide spectrum of bacteria. The role of LAP against intramammary infection of dairy cows was investigated. After intramammary challenge of lipopolysaccharide, the gram-negative bacteria component, changes of LAP concentration, lactoperoxidase activity, and somatic cell count in milk were measured. Challenge with lipopolysaccharide stimulated active secretion of LAP into milk.