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### ***In Vitro* effects of Immunoglobulin G on Neutrophil Activity against bovine mastitis causing *Streptococcus uberis***

Arbhabhorn Thepsit Siriwansilapee and Kittisak Ajariyakhajorn

*Department of Veterinary Medicine, Faculty of Veterinary Science,  
Chulalongkorn University, Bangkok*

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**Abstract** The effect of immunoglobulin G (IgG) on neutrophil activity *in vitro* against bovine mastitis causing *S. uberis* was investigated. Sources of IgG were from milk and serum samples which were collected from *S. uberis* intramammary infection (IMI) lactating cows, healthy cows, and in hyperimmune serum of immunized *S. uberis* Clinical Mastitis (CM) and Subclinical Mastitis (SCM) isolated calves. A third group of saline injected calves served as control. Milk, serum and hyperimmune serum were investigated by determining *S. uberis*-specific IgG on neutrophil activities, including evaluate of phagocytosis activity with FITC-labeled *S. uberis* by flow cytometry and determine killing ability of *S. uberis* by plate count method. Results showed that IgG derived from serum of *S. uberis* IMI cases influenced on phagocytosis in both CM and SCM isolates but could not influence on killing ability, on the other hand, IgG derived from milk of *S. uberis* IMI cases influence on killing ability of neutrophil in both isolations. However, *S. uberis*-specific IgG from hyperimmune serum of immunized *S. uberis* CM and SCM isolated calves influence on phagocytosis in *S. uberis* SCM isolate but could not clearly influence on killing ability in CM isolation.

**Keywords :** Immunoglobulin G Neutrophil activity *Streptococcus uberis* Bovine mastitis

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