Bonilla-Aldana DK, Quintero-Rada K, Montoya-Posada JP, Soler-Tovar D, Barato P, Arteaga-Livias K, Zambrano LI, Faccini-Martínez AA and Rodríguez-Morales AJ.

ABSTRACT

While some *Ehrlichia* species, such as *E. ruminantium* and *E. minasensis*, are not popular even among veterinarians, they can infect cattle. The current study aimed to review studies on *Ehrlichia* spp. to evaluate its worldwide molecular prevalence, given the lack of information about bovine ehrlichiosis and the lack of previous systematic reviews and meta-analyses on this subject. In order to determine the molecular prevalence of *Ehrlichia* spp. in cattle, a systematic review of the literature was conducted in three databases. A meta-analysis with a random-effects model was performed to calculate the pooled prevalence with 95% confidence intervals (95% CI) and measures of heterogeneity were reported. Subgroup analyses were performed in terms of *Ehrlichia* species, country, and regions. The literature search yielded 1051 papers until August 1, 2019, with 71 studies entirely eligible for review. The pooled molecular prevalence for *Ehrlichia* at the individual level (N = 6232) was 2.3% (95% CI: 1.7-2.9%) with the highest value of 82.4%. Studies identified the highest pooled molecular prevalence of 6.6% (95% CI: 0.6-12.7%) for *E. canis*, followed by *E. ruminantium* (n = 4695, 75.33%) 52 studies, with 1.7% (95% CI: 1.1-2.3%) and *E. chaffeensis* with 1.5% (95% CI: 0.0-0.3%). Moreover, the obtained result was indicative of only one study addressing *E. minasensis*. As the findings suggested, heartwater (*E. ruminantium* infection) is a notifiable disease of domestic and wild ruminants, recorded by the World Organization for Animal Health. There is a possible risk of endemic heartwater in the Americas due to the climatic features. Furthermore, *E. minasensis*, *E. chaffeensis*, and *E. canis* were observed in cattle although the two last species could be a molecular misidentification with regard to their phylogenetic relationships with *E. minasensis*. 
**Keywords:** Bacteria, Bovine, *Ehrlichia*, Systematic review, Tick-borne

Review

Uses of Immunoglobulins as an Antimicrobials Alternative in Veterinary Medicine.

Abd El-Ghany WA


**ABSTRACT**
As a result of increasing the resistance to antimicrobials in the field of veterinary medicine that reflects on human health, there is a great demand to use some drug alternatives. The application of avian immunoglobulins (IgY) is regarded as an important alternative strategy. The IgYs have been produced by several techniques and applied for animals using different methods. In addition, egg yolk IgYs have many advantages over blood type ones. There are many uses of IgYs in veterinary medicine. They have been used for the prophylaxis and treatment of different infections especially the enteric ones in cattle, pigs, rabbits, dogs, rats, mice, and fish species. Moreover, several studies showed the importance of IgY for competing for the *in vivo* enteric pathogens in poultry and the *in vitro* foodborne pathogen. Therefore, it is important to put a spotlight on applications of egg yolk immunoglobulins IgY in veterinary medicine to overcome the problems of antimicrobials’ resistance as well as the tissue residues that adversely affect human health.

**Keywords:** Advantages, Animals, Poultry, Production, Yolk antibodies

[Full text- PDF ] [XML] [Google Scholar] [Crossref Metadata]

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**Research Paper**

**Changes of Body Condition Scores, Serum Biochemistry and Liver Triacylglycerol in Periparturient Holstein Friesian Dairy Cows Raised in a Small-Holder Farm.**

Triwutanon S and Rukkwamsuk Th

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ABSTRACT

This Negative energy balance (NEB) inevitably occurs in periparturient dairy cows. Its consequences are related to reduced cows’ performances. Most studies concerning the NEB are performed in dairy cows of large-scale farms, particularly raised under non-tropical climate. The current study aimed to investigate the changes in body condition score, serum biochemical parameters, and liver triacylglycerol (TAG) accumulation in periparturient Holstein Friesian dairy cows raised by a small-holder farm. In this regard, 10 healthy pregnant dairy cows in a small-holder farm were recruited for the study. At 4 weeks before and 1, 2, 4, and 8 weeks after calving, blood samples were collected for determination of glucose, non-esterified fatty acid (NEFA), β-hydroxybutyrate (BHBA), and insulin-like growth factor-I (IGF-I) concentrations. BCS was evaluated at 4 weeks before and 2 weeks after calving. Liver samples were collected 4 weeks before and 2 weeks after calving to determine TAG concentration. Results revealed that serum NEFA and liver TAG concentration were elevated postpartum. Serum BHBA concentrations increased postpartum and the concentration indicated that dairy cows entered NEB condition as type I ketosis with a longer period. Serum IGF-I concentrations and BCS did not differ between before and after calving. In conclusion, dairy cows raised under small-holder tropical conditions suffered from serious NEB, though the cows had low milk production, as compared with the commercial non-tropical condition.

Keywords: Blood biochemistry, Dairy cow, Liver triacylglycerol, Negative energy balance, Small-holder farm
**ABSTRACT**

The aim of the present research was to determine the effect of both the gender of the dams pregnant with a female fetus, in the pregnancy period, at the giving-birth period and after it, on the chemical composition and some biological parameters of the colostrum. Blood serum was collected from four groups of pregnant dams (four animals in each group) during the dry period and the colostrum was collected from each group the same day after giving birth. The dams were divided into four equal groups randomly, based on the gender of their offspring. The dams that gave birth to a male fetus were vaccinated with a commercial vaccine, while the dams that gave birth to a female fetus were not vaccinated. Blood serum and colostrum samples were analyzed for total protein, fat, lactose, immunoglobuline G (IgG), and the activities of antioxidant enzymes, such as superoxide dismutase, glutathione peroxidase, and catalase. The results showed that the colostrum of dams that gave birth to a male fetus had a higher content of total protein, fat, and lactose. Additionally, vaccination improved the same colostrum properties. Moreover, the IgG content was higher in the vaccinated group compared to the non-vaccinated one. The antioxidant enzymes activities were significantly higher in the vaccinated group than the non-vaccinated group. The results suggested that vaccination improves the colostrum quality and the health of the newborns.

**Keywords:** total protein, fat, lactose, IgG, antioxidant enzymes, vaccination.
improper handling and processing can cause pathogenic bacteria contamination. The present study aimed to investigate the contamination of blood cockle satay samples sold at Surabaya traditional market. The current study used a descriptive observational research design with a quantitative approach. A total of 11 samples were employed using cluster sampling. The obtained data were compared with those of Bergey’s manual of determinative bacteriology and Indonesian national standard. Based on the obtained results, the MPN/gram for one sample, 3.0 MPN/gram for two samples, and 3.6 MPN/gram for three samples. It can be concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with Escherichia coli. However, it potentially accumulates pollutant substances, both heavy metal or microbial so that future research will focus on identifying the reason that triggers contamination on blood cockle satay samples sold at Surabaya traditional market. This study concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with Escherichia coli. However, it potentially accumulates pollutant substances, both heavy metal or microbial so that future research will focus on identifying the reason that triggers contamination on blood cockle satay products sold at Surabaya traditional market. This study concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with Escherichia coli. However, it potentially accumulates pollutant substances, both heavy metal or microbial so that future research will focus on identifying the reason that triggers contamination on blood cockle satay products sold at Surabaya traditional market. This study concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with Escherichia coli. However, it potentially accumulates pollutant substances, both heavy metal or microbial so that future research will focus on identifying the reason that triggers contamination on blood cockle satay products sold at Surabaya traditional market. This study concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with Escherichia coli. However, it potentially accumulates pollutant substances, both heavy metal or microbial so that future research will focus on identifying the reason that triggers contamination on blood cockle satay products sold at Surabaya traditional market. This study concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with Escherichia coli. However, it potentially accumulates pollutant substances, both heavy metal or microbial so that future research will focus on identifying the reason that triggers contamination on blood cockle satay products sold at Surabaya traditional market. This study concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with Escherichia coli. However, it potentially accumulates pollutant substances, both heavy metal or microbial so that future research will focus on identifying the reason that triggers contamination on blood cockle satay products sold at Surabaya traditional market. This study concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with Escherichia coli. However, it potentially accumulates pollutant substances, both heavy metal or microbial so that future research will focus on identifying the reason that triggers contamination on blood cockle satay products sold at Surabaya traditional market. This study concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with Escherichia coli. However, it potentially accumulates pollutant substances, both heavy metal or microbial so that future research will focus on identifying the reason that triggers contamination on blood cockle satay products sold at Surabaya traditional market. This study concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with Escherichia coli. However, it potentially accumulates pollutant substances, both heavy metal or microbial so that future research will focus on identifying the reason that triggers contamination on blood cockle satay products sold at Surabaya traditional market.
Upper respiratory tract infection and pneumonia in foals are primarily caused by bacterial pathogens. A study conducted from June 2019 to April 2020 analyzed all samples subjected to bacteriology analysis. Isolated isolates proved to be sensitive to lomefloxacin, cefotaxime, meropenem, enrofloxacin, neomycin, and clarithromycin. One isolate was only sensitive to clarithromycin. Streptococcus mitis was identified as a significant causative agent.

In the present study, the whole worms extracted of T. vitulorum and M. digitatus have been analyzed for their antigenic proteins. Western blot analysis was performed to detect cross-reaction in Toxocara vitulorum protein with anti-M. digitatus serum. The study aimed to determine specific proteins that caused cross-reaction between the two species. A total of 12 bands were detected in the serum of M. digitatus with relative molecular masses ranging from 176 to 10 kDa.

The study of gastrointestinal parasites in Merino sheep in Lesotho indicated that nematodes, coccidia, and cestodes were prevalent. The prevalence rates were 53.9%, 46.5%, and 4.3% in the Maseru district, respectively. In the Quthing district, the prevalence rates were 65.0%, 38.2%, and 0.9%, respectively. The faecal egg counts in the Maseru district ranged from 0 to 8,000 eggs per gram. The agroecological zone and host age significantly affected the nematode infestation in both districts. Juveniles had higher faecal egg counts compared to adults. Gender did not affect the prevalence and faecal egg load of gastrointestinal parasites.