**Sample abstract:**

**Curcumin in Veterinary Medicine: A Review of Benefits, Dosage, and Applications in Poultry**

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Curcumin, the active compound found in turmeric (Curcuma longa L.), has been widely used in India, China, and Southeast Asia as an aromatic stimulant, food preservative, and coloring material. It has been shown to have anti-inflammatory, antioxidant, anticarcinogenic, antidiabetic, antibacterial, antiprotozoal, antiviral, antifibrotic, immunomodulatory, and antifungal properties (1). In veterinary medicine, curcumin has been used as an anti-inflammatory agent in locomotor disorders and has been found to have nutritional and insecticide properties that improve poultry production (2). Recent studies have reported that curcumin is an excellent feed additive contributing to poultry growth and disease resistance. It has been found to have antimicrobial properties, protect animals from heat stress, and improve their immune response. However, determining the safe and effective dosage is a tedious task in poultry animals as well as insects. In poultry, under oxidative stress, the dosage is recommended to be 50-200 mg/kg, irrespective of age (3). Despite the potential benefits of curcumin in veterinary medicine, more research is needed to determine the safe and effective dosage for practical usage in poultry. Comparative research between curcumin and antibiotics is also lacking, and detailed studies are needed to understand the biochemical route or mechanism targeted by curcumin in animals. In conclusion, curcumin has been shown to have potential benefits in veterinary medicine, including anti-inflammatory, antioxidant, and insecticidal properties. However, more research is needed to determine the safe and effective dosage for practical usage in poultry animals.

**Keywords:**

Curcumin, Dosage, Poultry

**References:**

1. Kazemi-Darabadi S, Nayebzadeh R, Shahbazfar AA, et al. Curcumin and nanocurcumin oral supplementation improve muscle healing in a rat model of surgical muscle laceration. Bull Emerg Trauma 2019; 7(3):292-299.

2. Kocaadam B, Şanlier N. Curcumin, an active component of turmeric (Curcuma longa), and its effects on health. Crit Rev Food Sci Nutr 2017; 57(13):2889-2895.

3. Sureshbabu A, Smirnova E, Karthikeyan A, et al. The impact of curcumin on livestock and poultry animal's performance and management of insect pests. Front Vet Sci 2023;10:1048067. doi: 10.3389/fvets.2023.1048067.