

3rd International Summit on **TOXICOLOGY & Applied Pharmacology**

October 20-22, 2014 DoubleTree by Hilton Hotel Chicago-North Shore, USA

Surveillance of chloramphenicol residues in milk, eggs and chicken meat by LCMSMS

Sarathchandra Ghadevaru

Tamil Nadu Veterinary and Animal Sciences University, India

Chloramphenicol has been banned for use in all food-producing animals by the European Union (EU), and most of the developed countries. The EU recently set a minimum required performance limit (mrpl) for chloramphenicol determination at 0.3 µg/kg (ppb) in all foods of animal origin. The growing food safety concerns call for intensive surveillance of chloramphenicol in food products. The objective of the study was to assess whether milk, eggs and chicken meat produced by the livestock farmers in Tamil Nadu state of India were contaminated with chloramphenicol residues. Liquid chromatography/ mass spectrometry (LC/MSMS) method was employed for the determination of chloramphenicol (CAP) residues in milk, eggs, chicken muscle and liver, and kidney. CAP was extracted from the samples with acetonitrile and defatted with hexane. The acetonitrile extracts were then evaporated, and residues reconstituted in 10 mM ammonium acetate--acetonitrile mobile phase and injected into the LC system, and detection was by a triple quadrupole mass spectrometer operated in selected reaction monitoring (SRM) mode. The method studied was sensitive enough to detect and quantify 0.050 ug/kg (ppb) chloramphenicol for screening purposes, much lower than the Minimum Required Performance Limit (MRPL) of 0.3 µg/kg imposed by European Commission's regulation. The study revealed that most of the samples were in compliance with MRL and growing awareness amongst farmers to avoid banned antibiotic CAP.

Biography

Sarathchandra Ghadevaru is Professor and Head, Pharmacovigilance Laboratory for Animal Feed and Food Safety in the Directorate of Centre for Animal Health Studies, Tamil Nadu Veterinary and Animal Sciences University, India. His Doctoral programme elicited the toxicodynamics/mode of action and antidotes to combat one of the common suicidal and homicidal phytotoxin (*Cleistanthus collinus (Oduvanthalai*: Tamil); very frequently encountered in malicious poisoning of cattle as suitable model for alternative to animal toxicity. He established a National facility – Pharmacovigilance Laboratory for Animal Feed and Food Safety as per FDA/EU norms. He was the first veterinarian to be Certified as NABL Assessor for 17025 Laboratory Accreditation. He received many honors and awards and has obtained Grants -DST/APED. His area of specialization is Veterinary Diagnostic and Regulatory Toxicology.

sarathchandrag@tanuvas.org.in