Multi-analysis on the use of *Saccharomyces cerevisiae boulardii* CNCM I-1079 to reduce contamination of broiler carcasses with *Salmonella ssp*.

V.Demey and E.Chevaux

Salmonella is the most frequently reported cause of foodborne outbreaks with known origin in the EU. Risk of infection in humans is associated with the consumption of contaminated food, such as poultry meat (EFSA, 2017). There is evidence that some probiotics such as live yeast could be effective in reducing the carriage of food born pathogens. The objective of this multi- analysis is to assemble the results available on the use of one specific probiotic (*Saccharomyces cerevisiae boulardii* CNCM I-1079 (LY)) on the reduction of *Salmonella spp* in broilers. Five studies from literature investigating the effect of LY on contamination of broiler carcasses with *Salmonella ssp* are included in the analysis. Each selected publication contains data on *Salmonella ssp* carriage in the cecum as well as contamination of the carcass. For each study, LY was added to the broiler feed at the dose of 1x10e9 CFU/kg of feed. Data are analyzed using a binary logistics model (Generalized Linear Mixed Model – SPSS 22.0). Results of this multi-analysis indicate that supplementation of broiler feed with LY resulted in a significant reduction of the number of animals positive for *Salmonella* carriage (Control: 37% positives versus LY: 12% positives; P<0.05). The number of carcasses contaminated with the foodborne pathogen were also significantly reduced in the LY-groups (Control: 41% positives versus LY: 20% positives; P<0.05). These results suggest that supplementation of broiler feeds with *Saccharomyces cerevisiae boulardii* CNCM I-1079 can help to reduce the carriage of *Salmonella ssp.* and therefore reduce the contamination of carcasses.