

***Campylobacter* in broilers: detection, characterization and dynamics of colonization - Vaz C.S.L.^{1*}, Voss-Rech D.¹, Pozza J.S.², Mattos G.L.M.¹, Santos F.B.O.¹, Coldebella A.¹, Silva V.S.¹, Lauria-Filgueiras A.L.³**

1 - Embrapa Suínos e Aves, Concórdia, SC - Brazil

2 - PIBIC/CNPq, Fundação Universidade do Contestado, Concórdia, SC - Brazil

3 - Laboratório de Zoonoses Bacterianas, Instituto Oswaldo Cruz, FIOCRUZ, Rio de Janeiro, RJ - Brazil

*poster presenter: clarissa.vaz@embrapa.br

Campylobacter is an emerging bacterial agent of foodborne disease for which broilers are a primary reservoir. Despite its relevance to the broiler industry, there is little information about *Campylobacter* in Brazilian broiler flocks. Our studies aimed to optimize protocols for *Campylobacter* isolation in broiler samples, characterize strains isolated from commercial farms in Southern Brazil and analyze the dynamics of *Campylobacter* colonization in broilers. To optimize isolation methods, cloacal swabs (CS), drag swabs (DS), feces and litter were collected from commercial broilers farms. Strains isolated from three companies were selected for PFGE and antimicrobial resistance analysis. A longitudinal study was performed on an experimental broiler farm where three consecutive flocks were reared and they were weekly sampled from 1 to 6 weeks of age. Direct plating onto different selective media resulted in the highest *Campylobacter* detection in CS (72.2%), DS (69.4%), feces (88.9%) and litter (63.9%). Genotypic and phenotypic patterns of strains analyzed showed the circulation of multiple *Campylobacter* subtypes, each individually related to the given company sampled. The longitudinal study showed that broiler flocks became *Campylobacter*-positive at three to four weeks, when positive environmental samples were also detected. *Campylobacter* spreaded quickly among broilers as soon as they became colonized. However, cleaning and disinfection between flocks reduce residual *Campylobacter* contamination in poultry houses. As an ongoing activity of this study, Embrapa Swine & Poultry is going to promote a meeting for technical discussion and laboratory training of Brazilian technicians in November 2012 to enhance capabilities on understanding and diagnosing *Campylobacter*.

Key-words: *Campylobacter*, poultry, food safety

Embrapa project number: 030806004-00 (Embrapa) / 578086/2008-5 (CNPq)

