Biocontrol of Campylobacter and other pathogens in the poultry gastrointestinal tract

Professor Arjan Narbad – IFR

Campylobacter is responsible for more than 280,000 cases of food poisoning each year resulting in more than 100 deaths in the UK alone and costing the UK economy an estimate £900 million per year. Four out of five cases of *Campylobacter* result from contaminated poultry. Recent surveys conducted by FSA indicate that meat products currently sold in the UK supermarkets are still contaminated with high levels of this pathogen. Novel and alternative methods are urgently needed to control the levels of such pathogens in meat products by reducing their initial colonisation of the poultry Gastrointestinal tract. Such reduction of Campylobacter and other zoonotic bacteria at the farm level would reduce food poisoning in humans and have positive impact on animal welfare.

Professor Arjan Narbad at the Institute for Food Research has devised an approach in which the natural gut microflora found in poultry can be enhanced to protect against *Campylobacter* and other pathogens such as *Clostridium perfringens*. This approach may have other beneficial effects such as an increased growth rate and improved feed conversion. Preliminary studies have confirmed that this approach has been effective in controlling the levels of *Campylobacter* in the poultry GI tract, which can significantly reduce human cases of food poisoning by preventing it entering the food chain. The Norwich Research Park Translational Funding will be used to develop a practical delivery method to poultry, undertake a study under a simulated farm environment and to assess the impact of the approach on poultry health and levels of *Campylobacter*.