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### **Conference Summary**

## 15th International Workshop on ***Campylobacter***, ***Helicobacter*** and Related Organisms

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The purpose of this communication is to update the veterinary public health community as to what poultry-related interventions were presented at the recent biennial International Workshop on *Campylobacter*, *Helicobacter* and Related Organisms (CHRO), which was held in Niigata, Japan, September 2–5, 2009. More than 30 years have passed since the publication of Martin Skirrow's seminal paper in the British Medical Journal in which he described *Campylobacter* enteritis as a new disease (1). This publication precipitated a global interest in thermophilic campylobacters. Three decades later, these organisms still pose a grave threat to public health. Furthermore, 10 years have passed since Parkhill et al. published the genome sequence of *Campylobacter jejuni* NCTC11168 (2).

Today, thermophilic campylobacters remain the most common cause of acute bacterial enteritis in the developed world (3), where the ingestion of contaminated chicken or poor food handling practices associated with raw chicken represents the primary route of transmission to humans. Thus, although these organisms are not a problem in animal health terms, they are of major importance to veterinary public health professionals. Of course, we know campylobacters existed before Skirrow's paper (1), but their fastidious nature made their detection microbiologically complicated. Since then, we have gained an enormous amount of data regarding these organisms, including the publication of the complete genome sequence for *C. jejuni* (2). Paradoxically, despite all this acquired knowledge, the prevalence of human infections remains high and we still have major problems in producing poultry that are free of campylobacters, although a quantitative reduction in the amount of campylobacters in raw poultry meat on retail sale would have a notable effect in reducing human foodborne disease. On October 6, 2009 the UK Food Standards Agency published a report, which indicated a *Campylobacter* spp. prevalence rate in retail chicken of 65.2% (confidence interval 62.1%–68.2%) in 927 samples tested (4).

Information regarding all the sessions and speakers at the International Workshop on *Campylobacter*, *Helicobacter* and Related Organisms (CHRO) is detailed on the symposium website (<http://chro2009.jp>). Summaries of the interventions presented at the Workshop are given in the Table. Paradoxically, there were few reports on interventions for adoption in developing and underdeveloped nations, where this disease is responsible for much illness and death. The interventions reported at the meeting were largely for adoption in industrialized nations and followed the themes of biosecurity, use of bacteriophages, bacteriocins, probiotics, antimicrobial drugs, and vaccination and reported varying degrees of success. What is clear from these data is that there is no single magic bullet intervention that can be singularly relied upon by the poultry industry to

be an absolute control of campylobacters in poultry. Hence, reduction may be achieved through an integrated combination of several of these interventions. What is now urgently required is for the most promising of these interventions to be adopted on an industrial scale to reduce the burden of campylobacters on human foodborne disease globally.

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Dr Matsuda is Professor of Molecular Biology, School of Environmental Health Sciences, Azabu University, Sagamihara, Japan, and has been working on campylobacters for many years. Members of Professor Matsuda's group have been key global researchers into the fundamental aspects of urease-producing campylobacters (urease-positive thermophilic *Campylobacter*).

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## Table

[Table. Summary of poultry and poultry-related intervention measures presented at 15th International Workshop on \*Campylobacter, Helicobacter\* and Related Organisms in Niigata, Japan. September 2009](#)

## Suggested Citation for this Article

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