

Professor Charles Penn

Emeritus Professor

[School of Biosciences \(/schools/biosciences/index.aspx\)](/schools/biosciences/index.aspx)

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Research

Research Theme within School of Biosciences: Molecular Microbiology

Cellular and molecular biology, genomics, pathogenesis, and epidemiology of foodborne bacterial pathogens.

Molecular and cellular aspects of pathogenesis, gene regulation and physiology of the important gastrointestinal pathogens *Campylobacter jejuni*, *Helicobacter pylori* and *Escherichia coli*, using molecular genetics, molecular analytical and ultrastructural approaches, physiological studies, and information derived from genomic sequencing. High throughput functional genomics technologies (microarray studies of gene transcription, proteomics) are used where appropriate. Molecular studies on the diversity and characterization of gut bacteria.

Publications

Li G, Tivendale KA, Liu P, Feng Y, Wannemuehler Y, Cai W, Mangiamele P, Johnson TJ, Constantinidou C, Penn CW, Nolan LK, Payne SM (2011). Transcriptome analysis of avian pathogenic *Escherichia coli* O1 in chicken serum reveals adaptive responses to systemic infection. *Infect Immun.* **79**:1951-60. PubMed PMID: 21357721.

Zampronio CG, Blackwell G, Penn CW, Cooper HJ (2011). Novel glycosylation sites localized in *Campylobacter jejuni* flagellin FlaA by liquid chromatography electron capture dissociation tandem mass spectrometry. *J Proteome Res.* **4**:1238-45. PubMed PMID: 1158479.

Holmes CW, Penn CW, Lund PA (2010). The hrcA and hspR regulons of *Campylobacter jejuni*. *Microbiology* **156**:158-66. PubMed PMID: 19850618.

Pallen MJ, Loman NJ, Penn CW (2010). High-throughput sequencing and clinical microbiology: progress, opportunities and challenges. *Curr Opin Microbiol.* **13**:625-31. Review. PubMed PMID: 20843733.