ABSTRACT

Normal colonic epithelium bombarded by a range of molecular changes, affecting cell proliferation and apoptosis, result in the initiation of an adenoma and consequently an invasive carcinoma, which is usually lethal. One of the main characteristics of tumour progression is the loss of regulation between the cell cycle and apoptosis. Under normal circumstances, these processes are strictly controlled by a number of regulators and inhibitors. Previous studies have implicated the novel Domain With No Name gene in apoptosis. This study aimed to characterize the expression patterns and levels of the gene in colon cancer and to determine its role in apoptosis.

In situ hybridisation, immunocytochemistry and quantitative PCR localised the gene and its products in cancerous and normal colon tissue. Combined with apoptosis detection studies, proliferation assays and Bcl-2 assays, the results suggest that the gene is involved in promoting apoptosis in cancerous cells i.e. the targeting of undesirable cells. *Helicobacter pylorus* was implicated in the progression of non-invasive colon cancer to the invasive state.

From this study DWNN is proposed to be a pro-apoptotic participant in programmed cell death and classification studies such as these allow for potential manipulation of the apoptotic system to serve as a therapeutic corridor.