



Turkish Journal of Medical Sciences

Turkish Journal

of

Medical Sciences

 [Keywords](#)
 [Authors](#)



medsci@tubitak.gov.tr

[Scientific Journals Home Page](#)

Alterations of MUC2 Mucin in Colorectal Adenocarcinoma

Nurten AKSOY¹

Anthony P. CORFIELD³

Christos PARASKEVA⁴

David J. THORNTON²

John K. SHEEHAN²

¹Department of Biochemistry, Faculty of Medicine, Harran University, Şanlıurfa 63300, Turkey,

²Wellcome Trust Centre for Cell-Matrix Research, Division of Biochemistry, 2.205 School of Biological Sciences, University of Manchester, Manchester M13 9PT, UK;

³University of Bristol, Department of Medicine, Bristol Royal Infirmary, Bristol, BS2 8HW, UK;

⁴CRC Colorectal Tumour Biology Group, Department of Pathology and Microbiology, University of Bristol, School of Medical Sciences, University Walk, Bristol, BS8 1TD, UK.

Abstract: MUC2 is a well-identified intestinal mucin, present predominantly in the small intestine and colon. It is known that pathological alterations in the expression and composition of this mucin occur in several serious diseases related to epithelial surfaces, e.g., carcinoma and colitis ulcerosa. In this study, our aim was to find out whether there are any specific alterations in the expression and secretion of MUC2 in an adenoma- adenocarcinoma sequence that has been established as an in vitro model (1,2). The adenoma-carcinoma sequence represents the first example of the malignant progression of human colonic adenoma cells in vitro (2,3). Using a novel approach that we established previously (4) the combination of density gradient centrifugation and agarose gel electrophoresis we have characterised and compared the cell layer and medium MUC2 mucins among the colonic cell lines representing different stages of colorectal carcinogenesis. The results indicate that the expression and secretion of MUC2 mucin decrease from adenoma to adenocarcinoma. This is consistent with frequently observations in in vivo carcinogenesis (5) and strongly suggests that intestinal MUC2 mucins may be a useful marker for malignant transformation.

Key Words: Mucins, MUC2, PC/AA cell line, carcinogenesis, tumour markers.

Turk J Med Sci 2000; **30**(4): 359-366.

Full text: [pdf](#)

Other articles published in the same issue: [Turk J Med Sci, vol.30,iss.4.](#)