Reviewer’s report

Title: Methylation profiling of twenty promoter-CpG islands, the genes of which may contribute to hepatocellular carcinogenesis in China

Authors:

Jian Yu (gyujian@citi2.net)
Min Ni (nimin516@hotmail.com)
Jian Xu (xhujian626@hotmail.com)
Jianren Gu (nlorg@public.sta.net.cn)
Jianguo Chen (chenjq@eastdau.com)
Lisheng Zhang (lishenzhang@sina.com)
Mengchao Wu (mcwu@public.sta.net.cn)
Hongyu Zhang (hyzhang@sh163.net)
Sushen Zhen (zhengss@mail.hz.zj.cn)
Jingde Zhu (zhujingde@yahoo.com)

Version: 1 Date: 23 Aug 2002

Reviewer: Dr Benjamin Tycko

Level of interest: A paper of considerable general medical or scientific interest

Advice on publication: Unable to decide on acceptance or rejection until the authors have responded to the compulsory revisions

This study of CpG island methylation in hepatocellular cancers has led to some interesting findings. Notably, a large number of CpG islands associated with hypermethylation in other types of cancers, and even in at least one independent study of hepatocellular carcinoma, were found unmethylated. Moreover, a tentative but interesting association was found between cirrhosis and p16 methylation.

The authors must confirm their contentious finding of lack of CpG island methylation at several of the loci by an independent assay. Optimally, this would be a non-PCR-dependent test, namely Southern blotting of genomic DNA digested with methylation-sensitive restriction enzymes. The analysis of the p14ARF and p15INK4B loci is of most interest in terms of this control experiment.

The Abstract is too diffuse and too long. The authors should emphasize more clearly their major findings - striking cancer-specific hypermethylation of p16 and RASSF1A, and lack of methylation of many of the other TS candidate genes in hepatocellular carcinomas.

Competing interests:

None declared.