

PublisherInfo		
PublisherName	:	BioMed Central
PublisherLocation	:	London
PublisherImprintName	:	BioMed Central

*BRC*A cancer mutations influence gene expression

ArticleInfo		
ArticleID	:	3995
ArticleDOI	:	10.1186/gb-spotlight-20010228-02
ArticleCitationID	:	spotlight-20010228-02
ArticleSequenceNumber	:	66
ArticleCategory	:	Research news
ArticleFirstPage	:	1
ArticleLastPage	:	2
ArticleHistory	:	RegistrationDate : 2001-02-28 OnlineDate : 2001-02-28
ArticleCopyright	:	BioMed Central Ltd2001
ArticleGrants	:	
ArticleContext	:	130592211

Tudor Toma

Email: ttoma@mail.dntis.ro

Women with a mutant *BRCA1* or *BRCA2* gene have a high risk of breast cancer (50-85%) because BRCA deficient cells have a decreased ability to repair damaged DNA. The histopathological changes in these cancers are often characteristic of the mutant gene but the reasons for these differences are unknown.

In a paper published in the 22 February *New England Journal of Medicine*, Hedenfalk *et al.* found that genes expressed by breast cancers with BRCA1 mutations are distinctive from those expressed by cancers with BRCA2 mutations.

Ingrid Hedenfalk and colleagues studied primary tumour RNA samples from carriers of the *BRCA1* or *BRCA2* mutations, and from patients with sporadic cases of breast cancer. Using a microarray of 6,512 complementary DNA clones of 5,361 genes they identified 176 genes expressed different in the two types of tumour (*N Engl J Med* 2001, **344**:539-548).

These findings suggest that a heritable mutation influences the gene-expression profile of the cancer. It is hoped that this will enable the identification of hereditary breast cancer on the basis of gene-expression profiles.

References

1. Hedenfalk I, Duggan D, Chen Y, *et al*: Gene-expression profiles in hereditary breast cancer. *N Engl J Med* 2001, 344:539-548., [<http://www.nejm.org/content/2001/0344/0008/0539.asp>]