

**Table 1. Mutation rates per nucleotide site ( $\times 10^{-9}$ ) in different tissues<sup>a</sup>**

Species	Tissue	Cell divisions per generation <sup>a</sup>	Mutation rates <sup>b</sup>	
			Per generation	Per cell division
<i>Homo sapiens</i>	Germline	216	12.85	0.06
	Retina	55	54.45	0.99
	Intestinal epithelium	600	162.00	0.27
	Fibroblast (culture)			1.34
	Lymphocytes (culture)			1.47
<i>Mus musculus</i>	Male germline	39	38.00	0.97
	Brain		76.94	
	Colon		83.35	
	Epidermis		90.38	
	Intestine		117.69	
	Liver		237.88	
	Lung		166.83	
	Spleen		130.00	
				178.38
<i>Rattus norvegicus</i>	Colon		178.38	
	Kidney		167.45	
	Liver		179.92	
	Lung		223.22	
	Mammary gland		57.70	
	Prostate		448.90	
	Spleen		101.62	
<i>Drosophila melanogaster</i>	Germline	36	4.65	0.13
	Whole body		380.92	
<i>Caenorhabditis elegans</i>	Germline	9	5.60	0.62
<i>Arabidopsis thaliana</i>	Germline	40	6.50	0.16
<i>Saccharomyces cerevisiae</i>		1	0.33	0.33
<i>Escherichia coli</i>		1	0.26	0.26

<sup>a</sup>References to data on numbers of germline cell divisions: human [Crow 2000]; *D. melanogaster* and mouse [57]; *C. elegans* [58]; and *A. thaliana* [59]. Numbers of cell divisions are unknown for the mouse and rat rates.

<sup>b</sup>Mammalian tissue-specific rates are given only for tissues in which at least two independent estimates have been acquired. All data on human mutation rates are taken from Lynch [36]. Data for somatic mutation rates in mouse and rat are derived from references contained within the supplementary material online. References to data on germline mutation rates are: *D. melanogaster* [5], *C. elegans* [4], *A. thaliana* [Ossowski *et al.*, 2009], *S. cerevisiae* [3], and *E. coli* [24].