

Table I. Empirical data for male rodents exposed to germ cells for ENU.

Dose (mg/kg) ^a	MIE		KE2			AO		
	Alkyl Adducts per nucleotide in male germ cells ^b	Time of sampling post-exposure	LacZ mutant frequency per nucleotide in transgenic rodent sperm	Time of sampling post-exposure	Reference	Mutations per nucleotide in offspring of exposed male mice (SLT)	Time of sampling post-exposure	Reference
0			1.74E-08	100 days	[van Delft and Baan 1995]	3.70E-09	70 days then mating to collect offspring	[Favor et al. 1990]
0			6.68E-09	70 days	[O'Brien et al. 2014]			
0			2.89E-08	52 days	[Liegibel and Schmezer 1997]			
0			5.91E-09	50 days	[Tinwell et al. 1997]			
10	7.6E-08	2 hrs						
20	1.05E-07	2 hrs						
25			2.504E-08	100 days	[van Delft and Baan 1995]			
25			2.13E-08	70 days	[O'Brien et al. 2014]			
40	2.53E-07	2 hrs				1.80E-08	70 days then mating to collect offspring	[Favor et al. 1990]
50			3.10E-08	100 days	[van Delft and Baan 1995]	4.51E-08	70 days then mating to collect offspring	[Favor et al. 1990]

50			3.34E-08	70 days	[O'Brien et al. 2014]			
75						1.14E-07	70 days then mating to collect offspring	[Favor et al. 1990]
80	3.97E-07	2 hrs				1.03E-07	70 days then mating to collect offspring	[Favor et al. 1990]
100			3.66E-08	70 days	[O'Brien et al. 2014]	1.67E-07	70 days then mating to collect offspring	[Favor et al. 1990]
150			1.16E-07	100 days	[van Delft and Baan 1995]	2.31E-07	70 days then mating to collect offspring	[Favor et al. 1990]
150			2.20E-07	52 days	[Liegibel and Schmezer 1997]			
150			9.40E-08	50 days	[Tinwell et al. 1997]			
160	7.94E-07	2 hrs				2.53E-07	70 days then mating to collect offspring	[Favor et al. 1990]
200						2.31E-07	70 days then mating to collect offspring	[Favor et al. 1990]
250	1.89-06	2 hrs				3.32E-07	70 days then mating to collect offspring	[Favor et al. 1990]

^a Exposure by acute intraperitoneal injection unless noted otherwise

^b based on the adducts: 7-ethylguanine, O6-ethylguanine, 3-ethyladenine, O2-ethylcytosine, 3-ethylguanine and all data taken from [van Zeeland et al. 1990]

^c Exposure was by oral gavage, which will result in reduced target tissue exposure relative to intraperitoneal

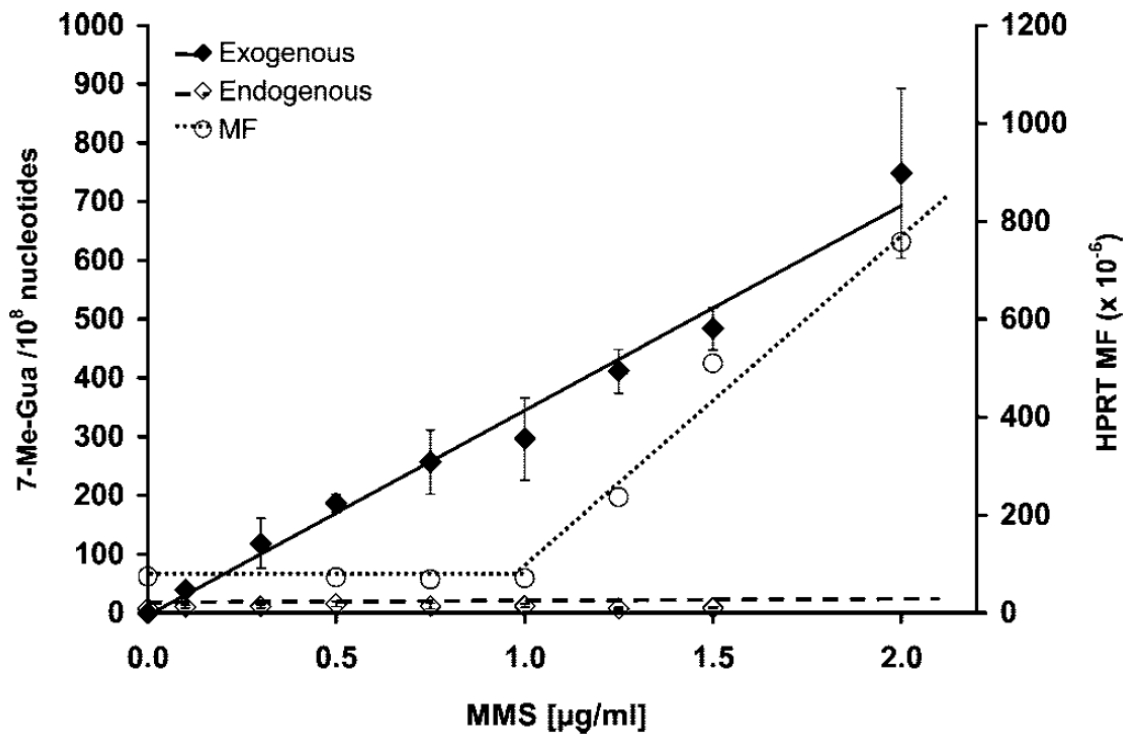


Figure 1. Reproduced with permission from [Swenberg et al. 2008]. N7-methyl guanine adducts versus HPRT mutation frequency in AHH-1 exposed to MMS for 24 hours. Endogenous adducts are shown in open diamonds (bottom), exogenous adducts in solid diamonds, and mutation frequency in open circles.

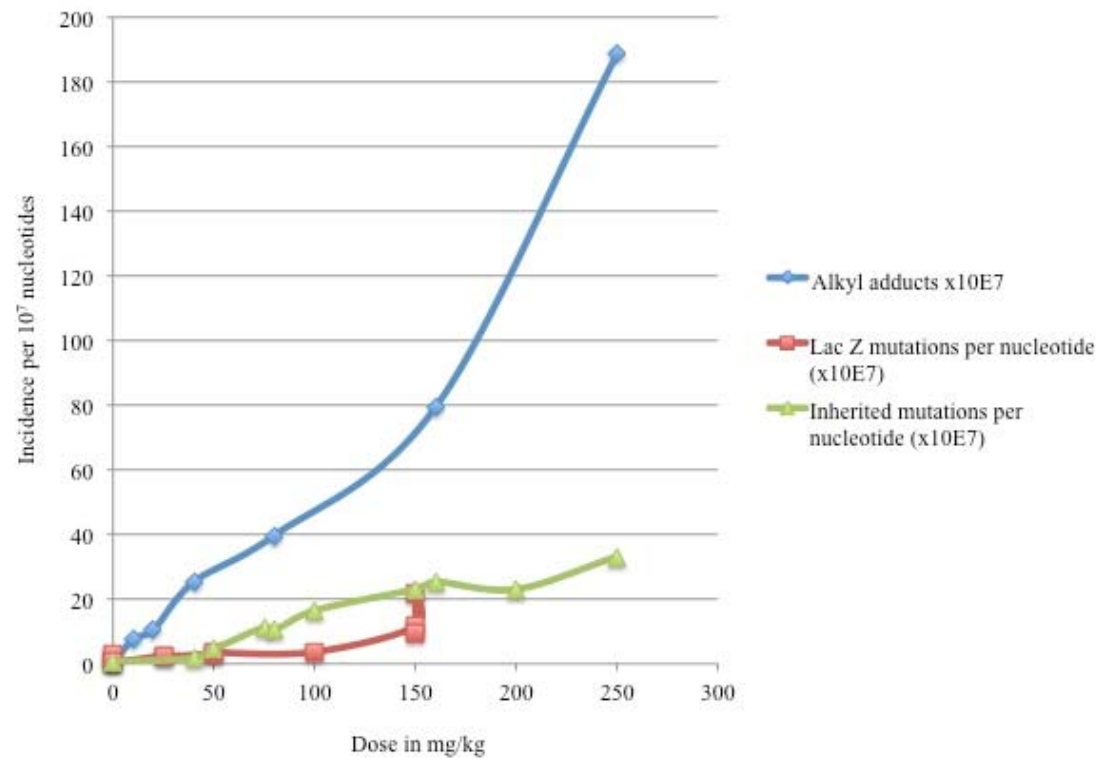


Figure 2. Relationship between adducts in testes, mutations in *lacZ* in sperm and mutations in offspring at seven loci.