

INDEX

- Aberrant cells 145, 209
Aberrations/cell 144
 chromosome 142
 multiple 142, 145, 205
 numerical 142
Achromatic gaps 142, 153, 205
Agar plates 27
Ames test 17, 26, 33
Analysis of variance 3, 9, 17, 83, 86, 92,
 158, 161, 165, 192, 206, 242, 244
Anaphase bridges 142
Aneuploidy 169
Artefact 33, 143, 182
Assay, bacterial 26
 bone marrow metaphase 185
 cytogenetic *in vivo; in vitro* 141, 144
 dominant lethal 5, 233
Drosophila 251
mammalian cell mutation 69, 96
mouse lymphoma 66
plate incorporation 27, 68
treat and plate 27
rodent germ cell 184, 223
sex-linked recessive lethal 252, 267
Auxotrophy 27
Averaging 4, 236

Bayesian statistics 22
Benzidine 276
Binomial distribution 6, 130, 207, 254, 259
 conditional 271
Biological significance 13, 16
Bonferroni correction 22, 41, 45, 46, 48,
 264
Bromodeoxyuridine 143, 155
Broods 254

Carcinogen 11, 198
Cell death 143
density 68, 70, 103
Cells, Chinese hamster assay 66, 71, 145,
 155, 156, 158, 163
L5178Y 66, 69, 78, 97, 102
mammalian 4, 66, 102
V79 66, 97
TK6 103
Chromosome, aberrations 7, 24, 145, 205
 damage 142, 184
 deletion 251
 exchange 15, 205, 207
 number 142
 X 252, 254, 267
Clastogenic activity 143, 149
Cloning efficiency 67
Cluster analysis 246
Coefficient of variation 34
Colony counts 17, 50, 68
 forming ability 143
Computer simulation 57
Confidence interval 74
Contingency table 202, 209
Control, historical 62, 72, 94, 153, 182, 191
 206, 263
 negative 4, 27, 73, 74, 90, 147, 159, 262
 positive 4, 27, 73, 74, 159, 262, 263
 solvent 30, 144
Corpora lutea 235
Cultures independent
 replicate 6, 17, 44, 71, 94, 147, 165
 suspension 69, 70
Cyanodimethylaniline 275

Deaths, early 233, 248
 late 233
DNA damage 155
Degrees of freedom 34, 53, 86, 93, 146, 163
 166
Decision rules 22, 228

Index

293

- Diaminoterphenyl 276
 2,4-Dimethoxyaniline 41
 Dimethylnitrosamine 28
 Dimethylaminobenzimidazole 277
 Dose interval 32
 -response 4, 22, 41, 46, 62, 78, 94, 98,
 143, 206
 Doubling rule 44
Drosophila 251
 Ethyl methanesulphonate 208, 278, 281
 Experimental design 4, 5, 31, 68, 141, 251,
 260
 error 68, 97
 unit 5
 Expression time 68, 103, 105
 False negative 11, 32, 37, 47, 228
 positive 11, 32, 37, 198, 228, 238
 Foetus 4, 20, 233
 Genetic drift 30
 mutation 223
 Germ cell, post-meiotic 254
 Heterogeneity 147, 186, 201, 237
 Heterogeneity factor 109, 113, 127, 138
 Histidine 27, 33
 Homogeneity 146
 Human lymphocytes 141, 155, 158, 163
 Hypotonic 143
 Implants, live 235, 242
 Impurity 33
 Inoculum size 28, 32
 Jonckheere method 50
 Kastenbaum – Bowman tables 257, 272
 Linear regression 17, 20, 53, 75, 102
 Log mutant frequency 123, 136
 Maximum tolerated dose 205
 Medium, non-selective 28
 non-nutrient 28
 Metabolic activation 107, 122, 130, 142
 co-operation 70
 Metaphase analysis 209
 Micronucleus 184, 198, 206, 228
 Microsomal activation 29
 Microtitre trays 103, 104, 107, 119, 128
 Mitomycin C 192
 Mitotic delay 143
 index 227, 228
 Monte Carlo methods 24
 Mouse bone marrow haemopoietic cells
 156
 Mutation, clustering of 254, 267
 point 251
 rate 62, 111, 254, 264
 recessive lethal 251
 Mutants, induced 29, 61
 pre-existing 29, 62, 111
 spontaneous 29, 61, 66, 69, 70, 254
 per survivor 28
 Non-carcinogen 11
 Non-parametric methods 18, 20, 32, 40, 47,
 77, 78, 178, 186, 237
 Normoblast 184
 Null hypothesis 6, 7, 10, 22, 151, 163, 259
 Osmolality 182
 Ouabain 66, 111
 Outliers 21, 96, 223
 pH 182
 Parametric methods 18, 20, 32, 43, 47, 78,
 186, 198, 231
 Poisson distribution 19, 30, 69, 75, 80, 161,
 163, 166, 187
 Polychromatic erythrocytes 185
 Prototrophy 27
 Randomisation 6, 17, 40, 235
 Regression coefficient 47, 54
 linear 48, 53
 isotonic 49
 Revertant 30, 41
Salmonella 27, 51
 Sample, time 143, 182, 197
 size 5, 6, 256
 serial 153
 variation 34
 Significance levels 6, 14
 Sister chromatid exchange 24, 155
 Solubility 30
 Specificity 6, 11
 Spermatocytes 254
 Spermatogonia 223
 Spermatogenesis 254
 Spermatozoa 254
 Spindle malfunction 185
 poison 184

294 *Index*

- Standard deviation 54, 75
 - error 56, 169
- Statistical packages 24, 143, 178, 193, 200, 227, 247
- Sum of squares 54, 85, 88, 95, 198
- Survival 36, 51
- TA 100 36, 51
 - 1535 36
 - 1538 36
 - 98 36
- Test, Chi-square 3, 9, 146, 187, 206, 208, 254
 - Chakraborty's 50
 - dispersion 146
 - Dunnett's 22, 43, 46, 54, 88
 - Fisher's Exact 75, 77, 86, 91, 148, 261, 267
 - Fluctuation, bacterial 29, 102, 130
 - mammalian 102
 - Mann-Whitney 203, 204, 230, 237
- One-sided 6, 7, 264
- Two-sided 6, 7, 95, 151, 264
- Wilcoxon rank 187, 198
 - likelihood ratio 187, 198
- 6-Thioguanine 66, 69, 111
- Threshold 15, 79, 98
- Toxicity 41, 61, 73, 169, 267
 - Transformation, angular 18, 20, 59
 - logarithmic 41, 43, 77
 - square root 41, 43, 161, 193, 197, 242
 - Trend, linear 22, 88, 90, 98, 161, 170, 200
 - isotonic 49, 133, 139
- Trifluorothymidine 66, 69
- Type I and II errors 12, 16, 22, 36, 197, 260
- Variability 69, 163, 185
 - within cultures 163
 - between cultures 72, 166
- Wahrendorf's method 56
- Weighting 44
- Zero counts 70