

she has fostered the dissemination of relevant scientific information by her work for Mouse News Letter and its successor, Mouse Genome, e.g. as Editor from 1956 to 1970, more recently as a Chairman of Mouse News Letter Ltd and in many other ways. Equally important has been her service on the Committee for Standardized Genetic Nomenclature for Mice, which she joined in 1958 and has chaired since 1975. It is through her vigilance, foresight, powers of persuasion and sheer hard work that mouse genetic nomenclature is in its present satisfactory state, without any of the confusion and uncertainty which could easily have dogged such a rapidly advancing science. Thirdly, she found time among all her other activities to co-edit a new and greatly enlarged edition of *Genetic Variants and Strains of the Laboratory Mouse*, bearing her full share of all the extra work which that involved. It is also worth mentioning here that she has served or is serving on the Editorial Boards of at least eleven journals besides *Genetical Research*. She also officiated as Hon. Treasurer of the Genetical Society for a number of years and later as Vice-President.

Mary's scientific achievements led to her election in 1973 as Fellow of the Royal Society, which awarded her a Royal Medal in 1984. In 1979 she was elected a

Foreign Associate of the US National Academy of Sciences, also a Foreign Honorary Member of the American Academy of Arts and Sciences in 1980. She is an Honorary Fellow of her old College, Girton, and has received many other honours and awards.

Despite her imminent 'retirement', Mary continues to work with the efficiency and drive for which she is noted, making full use of the latest techniques and computer wizardry. Transgenic mice are now tools for further investigation of the *t*-complex, the wide array of *p* mutations is receiving closer attention but, more evident still, is her considerable interest in unravelling genomic regions of man-mouse homology, with her *Mouse Chromosome Atlas* as a very elegant way of illustrating these. With funds to continue this work, Mary's retirement looks set to be purely nominal and, with freedom from administrative chores, we hope she can enjoy many more years of exciting research and discovery with her colleagues.

Mary, we salute you! Thanks for everything and best wishes for the future!

Bruce Cattanch
Jo Peters
Tony Searle

Bibliography of Mary Lyon

1. Lyon, M. F. Hereditary absence of otoliths in the house mouse. *J. Physiol.* **114**, 410–418. 1951
2. Lyon, M. F. Absence of otoliths in the mouse: an effect of the pallid mutant. *J. Genet.* **51**, 638–650. 1953
3. Kaplan, W. D. & Lyon, M. F. Failure of mercaptoethylamine to protect against the mutagenic effects of radiation. I. Experiments with *Drosophila*. *Science* **118**, 776–777. 1953
4. Kaplan, W. D. & Lyon, M. F. Failure of mercaptoethylamine to protect against the mutagenic effects of radiation. II. Experiments with mice. *Science* **118**, 777–778. 1953
5. Carter, T. C., Lyon, M. F. & Phillips, R. J. S. Induction of sterility in male mice by chronic gamma irradiation. *Brit. J. Radiol.* **27**, 418–422. 1954
6. Carter, T. C., Lyon, M. F. & Phillips, R. J. S. Partial sex linkage in the mouse. *Nature* **174**, 309. 1954
7. Lyon, M. F. Stage of action of the litter-size effect on absence of otoliths in mice. *Z. indukt. Abstamm. u. Vererb. Lehre.* **86**, 289–292. 1954
8. Carter, T. C., Lyon, M. F., Phillips, R. J. S. & Slizynski, B. M. Cytogenetic studies of the mouse, using X-ray induced translocations. *Caryologia* **6** Suppl. 1046–7. 1954
9. Carter, T. C., Lyon, M. F. & Phillips, R. J. S. Gene-tagged chromosome translocations in eleven stocks of mice. *J. Genet.* **53**, 154–166. 1955
10. Lyon, M. F. Ataxia: a new recessive mutant of the house mouse. *J. Hered.* **46**, 77–80. 1955
11. Lyon, M. F. The developmental origin of hereditary absence of otoliths in mice. *J. Embryol. exp. Morph.* **3**, 230–241. 1955
12. Lyon, M. F. The development of the otoliths of the mouse. *J. Embryol. exp. Morph.* **3**, 213–229. 1955
13. Carter, T. C., Lyon, M. F. & Phillips, R. J. S. Induction of mutations in mice by chronic gamma irradiation; interim report. *Brit. J. Radiol.* **29**, 106–108. 1956
14. Lyon, M. F. Hereditary hair loss in the tufted mutant of the house mouse. *J. Hered.* **47**, 101–103. 1956
15. Lyon, M. F. Genetics and laboratory animal breeding. *J. Anim. Tech. Ass.* **7**, 9–11. 1956
16. Carter, T. C., Lyon, M. F. & Phillips, R. J. S. Further genetic studies of eleven translocations in the mouse. *J. Genet.* **54**, 462–473. 1956
17. Lyon, M. F. Twirler: a mutant affecting the inner ear of the house mouse. *J. Embryol. exp. Morph.* **6**, 105–116. 1958
18. Carter, T. C., Lyon, M. F. & Phillips, R. J. S. Genetic hazard of ionizing radiations. *Nature* **182**, 409. 1958
19. Lyon, M. F. & Phillips, R. J. S. Crossing-over in mice heterozygous for *t*-alleles. *Heredity* **13**, 23–32. 1959
20. Lyon, M. F. Some evidence concerning the 'mutational load' in inbred strains of mice. *Heredity* **13**, 341–352. 1959
21. Lyon, M. F. A new dominant T-allele in the house mouse. *J. Hered.* **50**, 140–142. 1959
22. Lyon, M. F. A further mutation of the mottled type in the house mouse. *J. Hered.* **51**, 116–121. 1960
23. Lyon, M. F. Zigzag: a genetic defect of the horizontal canals in the mouse. *Genet. Res., Camb.* **1**, 189–195. 1960
24. Lyon, M. F. Effect of X-rays on the mutation of *t*-alleles in the mouse. *Heredity* **14**, 247–252. 1960
25. Duffill, M. L. & Lyon, M. F. Flaked maize as a source of tape-worm infestation in mice. *J. Anim. Tech. Assn.* **10**, (4). 1960
26. Carter, T. C., Lyon, M. F. & Phillips, R. J. S. The

- genetic sensitivity to X-rays of mouse foetal gonads. *Genet. Res., Camb.* 1, 351–355. 1960
27. The committee on standardized nomenclature for mice. (G. D. Snell, J. Staats, M. F. Lyon, L. C. Dunn, H. Gruneberg, P. Hertwig, W. E. Heston). Standardized Nomenclature for Inbred strains of Mice, Second Listing. *Cancer Research* 20, 145–169. 1960
 28. Lyon, M. F. Linkage relations and some pleiotropic effects of the dreher mutant of the house mouse. *Genet. Res., Camb.* 2, 92–95. 1961
 29. Lyon, M. F. Gene action in the X-chromosome of the mouse (*Mus musculus* L.) *Nature* 190, 372–373. 1961
 30. Carter, T. C. & Lyon, M. F. An attempt to estimate the induction by X-rays of recessive lethal and visible mutations in mice. *Genet. Res., Camb.* 2, 296–305. 1961
 31. Lyon, M. F. Genetic factors on the X-chromosome. *Lancet* ii, 434. 1961
 32. Lyon, M. F. Sex-chromatin and gene action in the mammalian X chromosome. *Amer. J. Hum. Genet.* 14, 135–148. 1962
 33. Lyon, M. F., Phillips, R. J. S. and Searle, A. G. A test for mutagenicity of caffeine in mice. *Z. Vererbslehre* 93, 7–13. 1962
 34. Lyon, M. F. The nature of *t*-alleles in the mouse. *Ann. Hum. Genet.* 25, 263. 1961
 35. Lyon, M. F. Attempts to test the inactive-X theory of dosage compensation in mammals. *Ann. Hum. Genet.* 25, 423. 1962
 36. Lyon, M. F. Attempts to test the inactive-X theory of dosage compensation in mammals. *Genet. Res., Camb.* 4, 93–103. 1963
 37. Lyon, M. F. Mutant mice and their use in research. L.A.C. Collected Papers. 12, 57–63. 1963
 38. Lyon, M. F. Genetics of the Mouse. In *Animals for Research* (ed. W. Lane Petter), ch. 7, pp. 199–234. London: Academic Press. 1963
 39. Lyon, M. F. Lyonisation of the X-chromosome. *Lancet* ii, 1120–1121. 1963
 40. Lyon, M. F. Gene action in the X-chromosome of mammals including man. *Proc. IIInd. int. Cong. Hum. Genet.* 2, 1228–9. 1963
 41. Lyon, M. F. – Sex chromosome, human. In *McGraw-Hill Yearbook of Science and Technology*, pp. 369–370. 1964
 - 42, 43, 44. Lyon, M. F. & Meredith, R. The nature of *t*-alleles in the mouse. I, II, III. *Heredity* 19, 301–312, 313–325, 327–330. 1964
 45. Lyon, M. F., Phillips, R. J. S. & Searle, A. G. The overall rates of dominant and recessive lethal and visible mutation induced by spermatogonial X-irradiation of mice. *Genet. Res., Camb.* 5, 448–467. 1964
 46. Lyon, M. F., Searle, A. G., Ford, C. E. & Ohno, S. A mouse translocation suppressing sex-linked variegation. *Cytogenetics* 3, 306–323. 1964
 47. Ohno, S. & Lyon, M. F. Cytological study of Searle's X-autosome translocation in *Mus musculus*. *Chromosoma* 16, 90–100. 1965
 48. Evans, H. J., Ford, C. E., Lyon, M. F. & Gray, J. DNA replication and genetic expression in female mice with morphologically distinguishable X-chromosomes. *Nature* 206, 900–903. 1965
 49. Lyon, M. F., Hulse, E. V. & Rowe, C. E. Foam-cell reticulosis of mice: an inherited condition resembling Gaucher's and Niemann–Pick diseases. *J. Med. Genet.* 2, 99–106. 1965
 50. Lyon, M. F. & Morris, T. Mutation rates at a new set of specific loci in the mouse. *Genet. Res., Camb.* 7, 12–17. 1966
 51. Lyon, M. F. X-chromosome inactivation in mammals. In *Advances in Teratology* (ed. D. Woollam), ch. 2, pp. 25–54. London: Logos Press. 1966
 52. Lyon, M. F. Order of loci on the X-chromosome of the mouse. *Genet. Res., Camb.* 7, 130–133. 1966
 53. Lyon, M. F. Sex chromatin and gene action in the X-chromosome of mammals. In *Sex Chromatin* (ed. K. Moore), ch. 21, pp. 370–386. Philadelphia: W. B. Saunders. 1966
 54. Lyon, M. F. & Meredith, R. Autosomal translocations causing male sterility and viable aneuploidy in the mouse. *Cytogenetics* 5, 335–354. 1966
 55. Lyon, M. F. Lack of evidence that inactivation of the mouse X-chromosome is incomplete. *Genet. Res., Camb.* 8, 197–203. 1966
 56. Lyon, M. F. Selective genetic inactivation in somatic cells. In *Genetic Variations in Somatic Cells* (Proceedings of a Symposium held in Prague, 9–11 August 1965), pp. 139–143. 1966
 57. Evans, E. P., Lyon, M. F. & Daglish, M. A mouse translocation giving a metacentric marker chromosome. *Cytogenetics* 6, 105–119. 1967
 58. Lyon, M. F. The X-chromosome and gene action in mammals. In *The Biology of Sex* (ed. A. Allison), pp. 121–134. Penguin Science Survey. 1967
 59. Lyon, M. F., Morris, T., Searle, A. G. & Butler, J. Occurrences and linkage relations of the mutant 'Extra-toes' in the mouse. *Genet. Res., Camb.* 9, 383–385. 1967
 60. Lyon, M. F., Butler, J. M. & Kemp, R. The positions of the centromeres in linkage groups II and IX of the mouse. *Genet. Res., Camb.* 11, 193–199. 1968
 61. Lyon, M. F. Chromosomal and subchromosomal inactivation. *Ann. Rev. Genet.* 2, 31–52. 1968
 62. Lyon, M. F. & Morris, T. Gene and chromosome mutation after large fractionated for unfractionated radiation doses to mouse spermatogonia. *Mutation Res.* 8, 191–198. 1969
 63. Lyon, M. F. A true hermaphrodite mouse presumed to be an XO/XY mosaic. *Cytogenetics* 8, 326–331. 1969
 64. Lyon, M. F. & Meredith, R. Muted, a new mutant affecting coat colour and otoliths of the mouse, and its position in linkage group XIV. *Genet. Res., Camb.* 14, 163–166. 1969
 65. Lyon, M. F., Morris, T., Glenister, P. & O'Grady, S. E. Induction of translocations in mouse spermatogonia by X-ray doses divided into many small fractions. *Mutation Res.* 9, 219–223. 1970
 66. Lyon, M. F. The activity of the sex chromosomes in mammals. *Science Progress* 58, 117–130. 1970
 67. Savkovic, N. V. & Lyon, M. F. Dose-response curve for X-ray-induced translocations in mouse spermatogonia. I. Single doses. *Mutation Res.* 9, 407–409. 1970
 68. Lyon, M. F. X-ray induced dominant lethal mutations in male guinea-pigs, hamsters and rabbits. *Mutation Res.* 10, 133–140. 1970
 69. Lyon, M. F. Genetic activity of sex chromosomes in somatic cells of mammals. *Phil. Trans. Roy. Soc. B.* 259, 41–52. 1970
 70. Lyon, M. F., Phillips, R. J. S. & Glenister, P. Dose-response curve for the yield of translocations in mouse spermatogonia after repeated small radiation doses. *Mutation Res.* 10, 497–501. 1970
 71. Ohno, S. & Lyon, M. F. X-linked testicular feminization in the mouse as a non-inducible regulatory

- mutation of the Jacob–Monod type. *Clinical Genetics* **1**, 121–127. 1970
72. Lyon, M. F. & Hawkes, S. G. X-linked gene for testicular feminization in the mouse. *Nature* **227**, 1217–1219. 1971
 73. Lyon, M. F. & Hulse, E. V. An inherited kidney disease of mice resembling human nephronophthisis. *J. med. Genet.* **8**, 41–48. 1971
 74. Lyon, M. F. & Smith, B. D. Species comparisons concerning radiation-induced dominant lethals and chromosome aberrations. *Mutation Res.* **11**, 45–58. 1971
 75. Gardner, R. L. & Lyon, M. F. X-chromosome inactivation studied by injection of a single cell into the mouse blastocyst. *Nature* **231**, 385–386. 1971
 76. Lyon, M. F. Possible mechanisms of X-chromosome inactivation. *Nature, New Biology* **232**, 229–232. 1971
 77. Lyon, M. F. Environmental radiation and genetic hazards to man. In *Population and Pollution* (ed. P. R. Cox and J. Peel), pp. 85–94. London: Academic Press. 1972
 78. Lyon, M. F. X-chromosome inactivation and developmental patterns in mammals. *Biol. Rev.* **47**, 1–35. 1972
 79. Lyon, M. F., Phillips, R. J. S. & Bailey, H. J. Mutagenic effects of repeated small radiation doses. I. Specific locus mutation rates. *Mutation Res.* **15**, 185–190. 1972
 80. Lyon, M. F., Phillips, R. J. S. & Glenister, P. H. Mutagenic effects of repeated small radiation doses to mouse spermatogonia. II. Translocation yield at various intervals. *Mutation Res.* **15**, 191–195. 1972
 81. Cattanaach, B. M., Wolfe, H. G. & Lyon, M. F. A comparative study of the coats of chimaeric mice and those of heterozygotes for X-linked genes. *Genet. Res., Camb.* **19**, 213–228. 1972
 82. Lyon, M. F., Papworth, D. G. & Phillips, R. J. S. Dose-rate and mutation frequency after irradiation of mouse spermatogonia. *Nature, New Biology* **238**, 101–104. 1972
 83. Lyon, M. F., Glenister, P. H. & Hawker, S. G. Do the H-2 and T-loci of the mouse have function in the haploid phase of sperm? *Nature* **240**, 152–153. 1972
 84. Lyon, M. F., Phillips, R. J. S. & Glenister, P. H. The mutagenic effect of repeated small radiation doses to mouse spermatogonia. III. Does repeated irradiation reduce translocation yield from a large radiation dose? *Mutation Res.* **17**, 81–85. 1973
 85. Lyon, M. F. & Hawker, S. G. Reproductive lifespan in irradiated and unirradiated chromosomally XO mice. *Genet. Res., Camb.* **21**, 185–194. 1973
 86. Lyon, M. F., Hendry, I. & Short, R. V. The sub-maxillary salivary glands as test organs for response to androgen in mice with testicular feminization. *J. Endocr.* **58**, 357–362. 1973
 87. Lyon, M. F. & Glenister, P. H. Evidence from Tfm/O that androgen is inessential for reproduction in female mice. *Nature* **247**, 366–367. 1974
 88. Lyon, M. F. & Simpson, G. M. An investigation into the possible genetic hazards of ultrasound. *British Journal of Radiology* **47**, 712–722. 1974
 89. Lyon, M. F. Review Lecture. Mechanisms and evolutionary origins of variable X-chromosome activity in mammals. *Proc. B. Soc. Lond. B.* **187**, 243–268. 1974
 90. Lyon, M. F. Role of X and Y chromosomes in mammalian sex determination and differentiation. *Helv. paediat. Acta Suppl.* **34**, 7–12. 1974
 91. Lyon, M. F. Evolution of X-chromosome inactivation in mammals. *Nature* **250**, 651–653. 1974
 92. Lyon, M. F. Sex chromosome activity in germ cells. In *Physiology and Genetics of Reproduction* (ed. E. M. Coutinho and F. Fuchs), Part A, pp. 63–71. New York: Plenum. 1974
 93. Lyon, M. F. Symposium No. 6: Gene and chromosome inactivation. *Genetics* **78**, 305–309. 1974
 94. Cox, B. D. & Lyon, M. F. X-ray induced dominant lethal mutations in mature and immature oocytes of guinea-pigs and golden hamsters. *Mutation Res.* **28**, 421–436. 1975
 95. Cox, B. D. & Lyon, M. F. The induction by X-rays of chromosome aberrations in germ cells of male guinea-pigs, golden hamsters and rabbits. I. Dose response in post-meiotic stages. *Mutation Res.* **29**, 93–109. 1975
 96. Cox, B. D. & Lyon, M. F. The induction by X-rays of chromosome aberrations in male guinea-pigs, golden hamsters and rabbits. II. Properties of translocations induced in post-meiotic stages. *Mutation Res.* **29**, 111–125. 1975
 97. Lyon, M. F. & Cox, B. D. The induction by X-rays of chromosome aberrations in male guinea-pigs, rabbits and golden hamsters. III. Dose-response relationship after single doses of X-rays to spermatogonia. *Mutation Res.* **29**, 407–422. 1975
 98. Lyon, M. F. & Cox, B. D. The induction by X-rays of chromosome aberrations in male guinea-pigs and golden hamsters. IV. Dose response for spermatogonia treated with fractionated doses. *Mutation Res.* **30**, 117–128. 1975
 99. Cox, B. D. & Lyon, M. F. The mutagenic effect of triethylenemelamine (TEM) on germ cells of male golden hamsters and guinea pigs. *Mutation Res.* **30**, 293–298. 1975
 100. Lyon, M. F. & Phillips, R. J. S. Specific locus mutation rates after repeated small radiation doses to mouse oocytes. *Mutation Res.* **30**, 375–382. 1975
 101. Bennett, D., Boyse, E. A., Lyon, M. F., Mathieson, B. J., Scheid, M. & Yanagisawa, K. Expression of H-Y (male) antigen in phenotypically female Tfm/Y mice. *Nature* **257**, 236–238. 1975
 102. Lyon, M. F., Glenister, P. H. & Lamoreux, M. L. Normal spermatozoa from androgen-resistant germ cells of chimaeric mice and the role of androgen in spermatogenesis. *Nature* **258**, 620–622. 1975
 103. Lyon, M. F. Implications of Freezing for the Preservation of Genetic Stocks. In *Proceedings of the Workshop on Basic Aspects of Freeze Preservation of Mouse Strains* (Jackson Laboratory, Bar Harbor, 16–18 September 1974). Stuttgart: Gustav Fischer. 1976
 104. Lyon, M. F., Ward, H. C. & Simpson, G. M. A genetic method for measuring non-disjunction in mice with Robertsonian translocations. *Genet. Res., Camb.* **26**, 283–295. 1976
 105. Lyon, M. F., Cox, B. D. & Marston, J. H. Dose-response data for X-ray induced translocations in spermatogonia of rhesus monkeys. *Mutation Res.* **35**, 429–436. 1976
 106. Lyon, M. F. Chromosome condensation in relation to genetic activity. Reprinted from *Life Sciences Research Report 4* (ed. V. G. Allfrey, E. K. F. Bautz, B. J. McCarthy, R. T. Schimke and A. Tissières). Dahlem Workshop on Organization and Expression of Chromosome. 1976
 107. Kacser, H., Mya Mya, K., Duncker, M., Wright, A. F., Bulfield, G., McLaren, A. & Lyon, M. F. Maternal histidine metabolism and its effect on foetal development in the mouse. *Nature* **265**, 262–266. 1977
 108. Lyon, M. F. Distribution of crossing-over in mouse chromosomes. *Genet. Res., Camb.* **28**, 291–299. 1976

109. Lyon, M. F. & Glenister, P. H. Factors affecting the observed number of young resulting from adjacent-2 disjunction in mice carrying a translocation. *Genet. Res., Camb.* **29**, 83–92. 1977
110. Whittingham, D. G., Lyon, M. F. & Glenister, P. H. Long-term storage of mouse embryos at -196°C : the effect of background radiation. *Genet. Res., Camb.* **29**, 171–181. 1977
111. Evans, E. P., Ford, C. E. & Lyon, M. F. Direct evidence of the capacity of the XY germ cell in the mouse to become an oocyte. *Nature* **267**, 430–431. 1977
112. Lyon, M. F. & Mason, I. Information on the nature of *t*-haplotypes from the interaction of mutant haplotypes in male fertility and segregation ratio. *Genet. Res., Camb.* **29**, 255–266. 1977
113. Lyon, M. F. & Bechtol, K. B. Derivation of mutant *t*-haplotypes of the mouse by presumed duplication or deletion. *Genet. Res., Camb.* **30**, 63–76. 1977
114. Lyon, M. F., Whittingham, D. G. & Glenister, P. H. Long-term storage of frozen mouse embryos under increased background irradiation. Reprinted from *The Freezing of Mammalian Embryos* (Ciba Foundation Symposium 52, new series), pp. 273–290. 1977
115. Caine, A. & Lyon, M. F. The induction of chromosome aberrations in mouse dictyate oocytes by X-rays and chemical mutagens. *Mutation Res.* **45**, 325–331. 1977
116. Lyon, M. F. Genetic nomenclature and nomenclatorial rules in the mouse. *Immunogenetics* **5**, 393–403. 1977
117. Whittingham, D. G., Lyon, M. F. & Glenister, P. H. Re-establishment of breeding stocks of mutant and inbred strains of mice from embryos stored at -196°C for prolonged periods. *Genet. Res., Camb.* **30**, 287–299. 1977
118. Preston, R. J., Adler, I.-D., Léonard, A. & Lyon, M. F. Mutagenicity of selected chemicals in *in vivo* cytogenetic assays. In *Proceedings of the Workshop on Comparative Chemical Mutagenesis* (Crabtree Valley Mall, Raleigh, North Carolina 30 October–4 November 1977, Environmental Science Research, Vol. 24). 1977
119. Lyon, M. F. Section II – Chairman's Address. Reprinted from *Reproduction and Evolution* (ed. J. H. Calaby and C. H. Tyndale-Biscoe), pp. 95–98. Canberra: Australian Academy of Science. 1977
120. Kaufman, M. H., Guc-Cubriilo, M. & Lyon, M. F. X chromosome inactivation in diploid parthenogenetic mouse embryos. *Nature* **271**, 547–549. 1978
121. Bechtol, K. B. & Lyon, M. F. H-2 typing of mutants of the t^6 haplotype in the Mouse. *Immunogenetics* **6**, 571–583. 1978
122. Lyon, M. F. Standardized genetic nomenclature for mice: Past, Present and Future. From *Origins of Inbred Mice* (ed. H. C. Morse III), pp. 445–455. New York: Academic Press. 1978
123. Caine, A. & Lyon, M. F. Reproductive capacity and dominant lethal mutations in female guinea-pigs and djungarian hamsters following X-rays or chemical mutagens. *Mutation Res.* **59**, 231–244. 1979
124. Lyon, M. F., Evans, E. P., Jarvis, S. E. & Sayers, I. *t*-Haplotypes of the mouse may involve a change in intercalary DNA. *Nature* **279**, 38–42. 1979
125. Lyon, M. F., Jarvis, S. E. & Sayers, I. Complementation reactions of a lethal mouse *t*-haplotype believed to include a deletion. *Genet. Res., Camb.* **33**, 153–161. 1979
126. Lyon, M. F., Phillips, R. J. S. & Fisher, G. Dose-response curves for radiation-induced gene mutations in mouse oocytes and their interpretation. *Mutation Res.* **63**, 161–173. 1979
127. Lyon, M. F. Nephronophthisis. From *Spontaneous Animal Models of Human Disease*, Vol. 2, (ed. E. J. Andrews, B. C. Ward and N. H. Altman) ch. 282, p. 274. New York: Academic Press. 1979
128. Lyon, M. F. & Glenister, P. H. Reduced reproductive performance in androgen-resistant *Tfm/Tfm* female mice. *Proc. R. Soc. Lond. B.* **208**, 1–12. 1980
129. Rastan, S., Kaufman, M. H., Handyside, A. H. & Lyon, M. F. X-chromosome inactivation in extra-embryonic membranes of diploid parthenogenetic mouse embryos demonstrated by differential staining. *Nature* **288**, 172–173. 1980
130. Lyon, M. F. Effects of radiation on fertility. *Brit. J. Radiol.* **54**, 81–84. 1981
131. Lyon, M. F. The *t*-complex and the genetical control of development. *Symp. Zool. Soc. Lond.* **47**, 455–477. 1981
132. Lyon, M. F., Cattanaach, B. M. & Charlton, H. M. Genes affecting sex differentiation in mammals. From *Mechanisms of Sex Differentiation in Animals and Man* (ed. C. R. Austin and R. G. Edwards), pp. 329–386. London: Academic Press. 1981
133. Lyon, M. F. Nomenclature. From *The Mouse in Biomedical Research*. Vol. 1 (ed. H. G. Foster, J. D. Small and J. G. Fox), ch. 3, pp. 27–38. New York: Academic Press. 1981
134. Lyon, M. F., Jarvis, S. E., Sayers, I. & Holmes, R. S. Lens opacity: a new gene for congenital cataract on chromosome 10 of the mouse. *Genet. Res., Camb.* **38**, 337–341. 1981
135. Lyon, M. F., Glenister, P. H. & Whittingham, D. G. Long-term viability of embryos stored under irradiation. From *Frozen Storage of Laboratory Animals* (ed. G. H. Zeilmaker), pp. 139–147. Stuttgart, New York: Gustav Fischer. 1981
136. Lyon, M. F. Rules for nomenclature of inbred strains. From *Genetic Variants and Strains of the Laboratory Mouse* (ed. M. C. Green), pp. 368–372. Stuttgart, New York: Gustav Fischer. 1981
137. Lyon, M. F. Miss Rita J. S. Phillips (obituary). *Mutation Res.* **81**, 263–264. 1981
138. Lyon, M. F. Rules and guidelines for gene nomenclature. From *Genetic Variants and Strains of the Laboratory Mouse* (ed. M. C. Green), pp. 1–7. Stuttgart, New York: Gustav Fischer. 1981
139. Lyon, M. F. Rules for nomenclature of chromosome anomalies. From *Genetic Variants and Strains of the Laboratory Mouse* (ed. M. C. Green), pp. 314–316. Stuttgart, New York: Gustav Fischer. 1981
140. Glenister, P. H. & Lyon, M. F. Experience of banking mutant genes. From *Frozen Storage of Laboratory Animals* (ed. G. H. Zeilmaker), pp. 157–163. Stuttgart, New York: Gustav Fischer. 1981
141. Lyon, M. F. Sensitivity of various germ-cell stages to environmental mutagens. *Mutation Res.* **87**, 323–345. 1981
142. Dalton, T. P., Edwards, J. H., Evans, E. P., Lyon, M. F., Parkinson, S. P., Peters, J. & Searle, A. G. Chromosome maps of man and mouse. *Clinical Genetics* **20**, 407–415. 1981
143. Lyon, M. F., Phillips, R. J. S. & Fisher, G. Use of an inversion to test for induced X-linked lethals in mice. *Mutation Res.* **92**, 217–228. 1982
144. Lyon, M. F. & Glenister, P. H. A new allele *sash* (W^{sa}) at the *W*-locus and a spontaneous recessive lethal in mice. *Genet. Res., Camb.* **39**, 315–322. 1982
145. Kirk, M. & Lyon, M. F. Induction of congenital anomalies in offspring of female mice exposed to varying doses of X-rays. *Mutation Res.* **106**, 73–83. 1982

146. Lyon, M. F. Problems of extrapolation from experimental data to human mutagenesis. In *Mutagens in our Environment*, pp. 127–136. New York: Alan R. Liss. 1982
147. Fritz, I. B., Lyon, M. F. & Setchell, B. P. Evidence for a defective seminiferous tubule barrier in testes of *Tfm* and *Sxr* mice. *J. Reprod. Fert.* **67**, 359–363. 1983
148. Lyon, M. F. & Loutit, J. F. X-linked factor in acquired immunodeficiency syndrome? *The Lancet*, 2 April, pp. 768. 1983
149. Lyon, M. F. The cryptic spread of mutant genes. *Ambio* **75–77**. 1983
150. Lyon, M. F. Problems in extrapolation of animal data to humans. In *Utilization of Mammalian Specific Locus Studies in Hazard Evaluation and Estimation of Genetic Risk* (ed. F. J. de Serres and W. Sheridan), pp. 289–305. Plenum Publishing Corporation. 1983
151. Lyon, M. F. The use of Robertsonian translocations for studies of nondisjunction. In *Radiation-induced Chromosome Damage in Man*, pp. 327–346. New York: Alan R. Liss. 1983
152. Lyon, M. F. The X chromosomes and their levels of activation. In *Cytogenetics of the Mammalian X Chromosome, Part A, Basic Mechanisms of X Chromosome Behaviour*, ch. 8, pp. 187–204. New York: Alan R. Liss. 1983
153. Kirk, K. M. & Lyon, M. F. Induction of congenital malformations in the offspring of male mice treated with X-rays at pre-meiotic and post-meiotic stages. *Mutation Res.* **125**, 75–85. 1984
154. Glenister, P. H., Whittingham, D. G. & Lyon, M. F. Further studies on the effect of radiation during the storage of frozen 8-cell mouse embryos at -196°C . *J. Reprod. Fert.* **70**, 229–234. 1984
155. Lyon, M. F. Comparison of the dominant visible and other mutation tests in the mouse. *Mutagenesis and Genetic Toxicology INSERM* **119**, 153–164. 1983
156. Lyon, M. F. Estimation of genetic risks and increased incidence of genetic disease due to environmental mutagens. *Mutation Res.* **115**, 255–291. 1983
157. Lyon, M. F. & Rastan, S. Parental source of chromosome imprinting and its relevance for X chromosome inactivation. *Differentiation* **26**, 63–67. 1984
158. Dudley, K., Potter, J., Lyon, M. F. & Willison, K. R. Analysis of male sterile mutations in the mouse using haploid stage expressed cDNA probes. *Nucleic Acids Research*, vol. 12, 4281–4293. 1984
159. Lyon, M. F. Transmission ratio distortion in mouse t-haplotypes is due to multiple distorter genes acting on a responder locus. *Cell* **37**, 621–628. 1984
160. Buckle, V. J., Edwards, J. H., Evans, E. P., Jonasson, J. A., Lyon, M. F., Peters, J., Searle, A. G. & Wedd, N. S. Chromosome maps of man and mouse II. *Clinical Genetics* **26**, 1–11. 1984
161. Lyon, M. F., Glenister, P. H., Loutit, J. F., Evans, E. P. & Peters, J. A presumed deletion covering the *W* and *Ph* loci of the mouse. *Genet. Res., Camb.* **44**, 161–168. 1984
162. Lyon, M. F. Evidence from genetic analysis of the mouse t-complex concerning its role in development. *Journal of Embryology and Experimental Morphology* **82**, Supplement p. 9. 1984
163. Lyon, M. F. Further data on the genetic basis of segregation distortion and sterility caused by Mouse t-haplotypes. *Genetical Research* **43**, 205. 1984
164. West, J. D., Peters, J. & Lyon, M. F. Genetic differences between two substrains of the inbred 101 mouse strain. *Genet. Res., Camb.* **44**, 343–346. 1984
165. Fox, H. S., Martin, G. R., Lyon, M. F., Herrmann, B., Frischauf, A.-M., Lehrach, H. & Silver, L. M. Molecular probes define different regions of the mouse t complex. *Cell* **40**, 63–69. 1985
166. West, J. D., Kirk, K. M., Goyder, Y. & Lyon, M. F. Discrimination between the effects of X-ray irradiation of the mouse oocyte and uterus on the induction of dominant lethals and congenital anomalies. I. Embryo-transfer experiments. *Mutation Res.* **149**, 221–230. 1985
167. West, J. D., Kirk, K. M., Goyder, Y. & Lyon, M. F. Discrimination between the effects of X-ray irradiation of the mouse oocyte and uterus on the induction of dominant lethals and congenital anomalies. II. Localised irradiation experiments. *Mutation Res.* **149**, 231–238. 1985
168. Loutit, J. F., Cattanaach, B. M. & Lyon, M. F. The gene triplet *Rw W Ph* controls murine haematopoiesis. *British Journal of Haematology* **60**, 219–232. 1985
169. Lyon, M. F. Attempts to estimate genetic risks caused by mutagens to later generations. Reprinted from Banbury Report 19: Risk Quantitation and Regulatory Policy, pp. 151–161. Cold Spring Harbor. 1985
170. Lyon, M. F., Fisher, G. & Glenister, P. H. A recessive allele of the mouse agouti locus showing lethality with yellow, A^y . *Genet. Res., Camb.* **46**, 95–99. 1985
171. Gardner, R. L., Lyon, M. F., Evans, E. P. & Burtenshaw, M. D. Clonal analysis of X-chromosome inactivation and the origin of the germ line in the mouse embryo. *Journal of Embryology and Experimental Morphology* **88**, 349–363. 1985
172. West, J. D., Lyon, M. F. & Peters, J. Genetic differences between substrains of the inbred mouse strain 101 and designation of a new strain 102. *Genet. Res., Camb.* **46**, 349–352. 1985
173. Rogers, J. H., Lyon, M. F. & Willison, K. R. The arrangement of H-2 class I genes in mouse t haplotypes. *Journal of Immunogenetics* **12**, 151–165. 1985
174. Lyon, M. F. Measuring mutation in man. *Nature* **318**, 315–316. 1985
175. Lyon, M. F. Male sterility of the mouse t-complex is due to homozygosity of the distorter genes. *Cell* **44**, 357–363. 1986
176. Glenister, P. H. & Lyon, M. F. Long-term storage of eight-cell mouse embryos at -196°C . *Journal of in vitro Fertilization and Embryo Transfer* **3**, 20–27. 1986
177. Lyon, M. F. X chromosomes and dosage compensation. *Nature* **320**, 313. 1986
178. Lyon, M. F., Scriver, C. R., Baker, L. R. I., Tenenhouse, H. S., Kronick, J. & Mandla, S. The Gy mutation: Another cause of X-linked hypophosphatemia in mouse. *Proc. Natl. Acad. Sci. USA* **83**, 4899–4903. 1986
179. Lyon, M. F., Zenthon, J., Evans, E. P., Burtenshaw, M. D., Wareham, K. A. & Williams, E. D. Lack of inactivation of a mouse X-linked gene physically separated from the inactivation centre. *J. Embryol. exp. Morph.* **97**, 75–85. 1986
180. Lyon, M. F. & Renshaw, R. Induction of congenital malformations in the offspring of mutagen treated mice. *Genetic Toxicology of Environmental Chemicals, Part B: Genetic Effects and Applied Mutagenesis*, pp. 449–458. New York: Alan R. Liss. 1986
181. Hogan, B. L. M., Horsburgh, G., Cohen, J., Hetherington, C. M., Fisher, G. & Lyon, M. F. *Small eyes (Sey)*: a homozygous lethal mutation on chromosome 2 which affects the differentiation of both lens and nasal placodes in the mouse. *J. Embryol. exp. Morph.* **97**, 95–110. 1986
182. Lyon, M. F., Zenthon, J., Evans, E. P., Burtenshaw, M. D., Dudley, K. & Willison, K. R. Location of the

- t*-complex on mouse chromosome 17 by in situ hybridization with *Tcp-1*. *Immunogenetics* **24**, 125–127. 1986
183. Brown, S. D. M., Fisher, E. M. C., Brockdorff, N., Cavanna, J. S., Lyon, M. F. & Greenfield, A. J. Microcloning of mouse chromosome X and 7 for the analysis of the *mdx* and *pudgy* loci. *Mouse News Letter* **76**, 44. 1986
 184. Lyon, M. F. Is the incidence of Down syndrome increasing? *Mutation Res.* **175**, 263–266. 1986
 185. Lyon, M. F. Nomenclature for homoeobox-containing genes. *Nature* **325**, 21–22. 1987
 186. Lyon, M. F. Distorter genes of the mouse *t*-complex impair male fertility when heterozygous. *Genet. Res., Camb.* **49**, 57–60. 1987
 187. Lyon, M. F., Zenthon, J., Burtenshaw, M. D. & Evans, E. P. Localization of the *Hprt* locus by in situ hybridization and distribution of loci on the mouse X-chromosome. *Cytogenet. Cell Genet.* **44**, 163–166. 1987
 188. Brockdorff, N., Fisher, E. M. C., Cavanna, J., Lyon, M. F. & Brown, S. D. M. The molecular mapping of the mouse X-chromosome. *Genet. Res., Camb.* **49**, 258. 1987
 189. Wareham, K. A., Williams, E. D., Glenister, P. H., Zenthon, J., Lyon, M. F. & Evans, E. P. Data from mouse X-autosome translocations on X-chromosome inactivation and reactivation. *Genet. Res., Camb.* **49**, 260. 1987
 190. Wareham, K. A., Lyon, M. F., Glenister, P. H. & Williams, E. D. Age related reactivation of an X-linked gene. *Nature* **327**, 725–727. 1987
 191. Brockdorff, N., Cross, G. S., Cavanna, J. S., Fisher, E. M. C., Lyon, M. F., Davies, K. E. & Brown, S. D. M. The mapping of a cDNA from the human X-linked Duchenne muscular dystrophy gene to the mouse X chromosome. *Nature* **328**, pp. 166–168. 1987
 192. Lyon, M. F. & Zenthon, J. Differences in or near the responder region of complete and partial mouse *t*-haplotypes. *Genet. Res., Camb.* **50**, 29–34. 1987
 193. Brockdorff, N., Fisher, E. M. C., Cavanna, J. S., Lyon, M. F. & Brown, S. D. M. Construction of a detailed molecular map of the mouse X chromosome by microcloning and interspecific crosses. *The EMBO Journal*, **6**, no. 11, 3291–3297. 1987
 194. Searle, A. G., Peters, J., Lyon, M. F., Evans, E. P., Edwards, J. H. & Buckle, V. J. Chromosome maps of man and mouse, III. *Genomics* **1**, 3–18. 1987
 195. Lyon, M. F., Zenthon, J., Evans, E. P., Burtenshaw, M. D. & Willison, K. R. Extent of the mouse *t* complex and its inversions shown by in situ hybridization. *Immunogenetics* **27**, 375–382. 1988
 196. Lyon, M. F. & Renshaw, R. Induction of congenital malformation in mice by parental irradiation: transmission to later generations. *Mutation Research* **198**, 277–283. 1988
 197. Lyon, M. F. The William Allan Memorial Award Address: X-chromosome inactivation and the location and expression of X-linked genes. *Am. J. Hum. Genet.* **42**, 8–16. 1988
 198. Lyon, M. F. Experimental work on induced mutations. *Phil. Trans. R. Soc. Lond. B* **319**, 341–351. 1988
 199. Lyon, M. F. Editorial. Clones and X-chromosomes. *Journal of Pathology* **155**, 97–99. 1988
 200. Nasir, J., Fisher, E. M. C., Brockdorff, N., Lyon, M. F. & Brown, S. D. M. A novel repeat sequence island on the mouse X chromosome. *Genet. Res., Camb.* **52**, 69. 1988
 201. Lyon, M. F., Zenthon, J., Evans, E. P., Burtenshaw, M. D. & Willison, K. R. *t*-complex inversions visualized by in situ hybridization. *Genet. Res., Camb.* **52**, 61. 1988
 202. Peters, J., Ball, S. T., Zenthon, J. & Lyon, M. F. Ornithine transcarbamylase (*Otc*) activity in mice carrying X-autosome translocations. *Genet. Res., Camb.* **52**, 62. 1988
 203. Lyon, M. F., Barker, J. E. & Popp, R. A. Mouse globin gene nomenclature. *Journal of Heredity* **79**, 93–95. 1988
 204. Brown, S. D. M., Brockdorff, N., Cavanna, J. S., Fisher, E. M. C., Greenfield, A. J., Lyon, M. F. & Nasir, J. The long-range mapping of mammalian chromosomes. *Current Topics in Microbiology and Immunology* vol. 137, pp. 3–12. Heidelberg: Springer-Verlag Berlin. 1988
 205. Nasir, J., Fisher, E. M. C., Brockdorff, N., Lyon, M. F. & Brown, S. D. M. A repeat sequence island on the mouse X chromosome. *Genome* **30**, suppl. 1, 98. 1988
 206. Willison, K., Marsh, M. & Lyon, M. F. Biochemical evidence for sharing of gene products in spermatogenesis. *Genet. Res., Camb.* **52**, 63. 1988
 207. Lyon, M. F. & Searle, A. G. (eds). *Genetic Variants and Strains of the Laboratory Mouse*, 2nd edn, Oxford: Oxford University Press. 1989
 208. Lyon, M. F., Herrmann, B. & Whitehill, K. Phenotypic effects of a presumed deletion of *t*-complex distorter-1 resemble the *t*-complex allele rather than wild type. *Genet. Res., Camb.* **53**, 227. 1989
 209. Lyon, M. F. *Rules and Guidelines for Gene Nomenclature. Genetic Variants and Strains of the Laboratory Mouse*, 2nd edn (ed. M. F. Lyon and A. G. Searle), pp. 1–11. Oxford: Oxford University Press. 1989
 210. Lyon, M. F. *Rules for nomenclature of chromosome anomalies. Genetic Variants and Strains of the Laboratory Mouse*, 2nd edn (ed. M. F. Lyon and A. G. Searle), pp. 574–575. Oxford: Oxford University Press. 1989
 211. Lyon, M. F. *Rules for Nomenclature of Inbred Strains. Genetic Variants and Strains of the Laboratory Mouse*, 2nd edn (ed. M. F. Lyon and A. G. Searle), pp. 632–635. Oxford: Oxford University Press. 1989
 212. Lane, P. W. & Lyon, M. F. *Mutant Genes and Biochemical Loci. Genetic Variants and Strains of the Laboratory Mouse*, 2nd edn (ed. M. F. Lyon and A. G. Searle), pp. 825–842. Oxford: Oxford University Press. 1989
 213. Lyon, M. F. X-chromosome inactivation as a system of gene dosage compensation to regulate gene expression. *Progress in Nucleic Acid Research and Molecular Biology* **36**, 119–130. 1989
 214. Searle, A. G., Peters, J., Lyon, M. F., Hall, J. G., Evans, E. P., Edwards, J. H. & Buckle, V. J. Chromosome maps of man and mouse. IV. *Ann. Hum. Genet.* **53**, 89–140. 1989
 215. Willison, K., Lewis, V., Zuckerman, K. S., Cordell, J., Dean, C., Miller, K., Lyon, M. F. & Marsh, M. The *t* complex polypeptide 1 (TCP-1) is associated with the cytoplasmic aspect of Golgi membranes. *Cell* **57**, 621–632. 1989
 216. Lyon, M. F. Search for differences among *t* haplotypes in distorter and responder genes. *Genet. Res., Camb.* **55**, 13–19. 1990
 217. Lyon, M. F., Peters, J., Glenister, P. H., Ball, S. & Wright, E. The scurfy mouse mutant has previously unrecognised hematological abnormalities and resembles Wiskott–Aldrich Syndrome. *Proc. Nat. Acad. Sci. USA* **87**, 2433–2437. 1990