

REFERENCES

Adams, J. N. and Luria, S.E. (1958) :

Transduction by bacteriophage P_1 , abnormal
phage function of the transducing particles.
Proc. Natl. Acad. Sc., Wash. 44 : 950.

Adelberg, E.A.; Mandel; M. and Chen, C.C.G (1965) :

Biochem. Biophys. Res. Commun. 18 : 788.
Cited by Calam, C.T. Methods in Microbiology.
1970, Vol. 3A, P. 442 Acad. Press, London.

Albert, A. (1951) :

The acridine, their preparation, physical,
chemical and biological properties and uses.
Edward Arnold and Co. London, p. 242.

Alber, T., Forage, A. and Hodgkins, B. (1972) :

Protection of normal, lysogenic and pyocinogenic
strains against ultraviolet radiation by bound
acriflavine.
J. Bacteriol. Vol. 110. p. 823 - 830.

Alexander, H.E. and Leidy, G. (1951) :

Determination of inherited traits of H.
influenzae by DNA fraction isolated from type
specific cells.

J. Exp. Med. 93 : 345.

Alexander, H.E. and Redman, W. (1953) :

J. Exp. Med. 97 : 797.

Cited by Burdett, W.J. Methodology in
Basic Genetics 1963. Holden-Day. Inc.,
San Francisco. P. 110.

Ali, A.M.M. (1966) :

Nitrous acid-induced mutants in S. Pombe.
Indian. J. Genet. 26 : 337.

Alloway, J.L. (1933) :

Further observation on the use of pneumococcus
extracts in affecting transformation of type
in vitro.

J. Exp. Med. 57 : 265.

Auerbach, C. (1949) :

Chemical mutagenesis.

Biol. Rev. 24 : 335.

Avery, O.T.; Macleod, C.M. and McCarty'M. (1944):

Studies on the chemical nature of the
substance inducing transformation of
pneumococcal type I.

Induction of transformation by a DNA
fraction isolated from pneumococcus type III.
J. Exp. Med. 79 : 137.

Barrit, M. 1936 :

The intensification of the Voges-Proskauer
reaction by the addition of α -naphthol.
J. Path. Bact. Seriol. 42 : 441.

Bautz - Freese, E. (1961) :

Transitions and transversions induced by
depurinating agents.

Proc. Nat. Acad. Sci.; Wash 47 : 540.

Beadle, G.W. and Tatum, A.L. (1941) :

Genetic control of biochemical reactions in
Neurospora.

Proc. Nat. Acad. Sci., Wash. 27 : 499.

Blumaurova, M.; Hostalek, z. and Vanelt, Z. (1973) :

Mutagenesis by UV irradiation and N-methyl-N-nitro-N-nitrosoguanidine in *Streptomyces aureofaciens*.

Stud. Biophys. 36 : 311.

Brenner, S.; Barnett, L.; Crick, F.H.C. and Orgel, A.

(1961) :

The theory of mutagenesis.

J. Molec. Biol. 3 : 121.

Bryan, L.E. and Kwans, S. (1981) :

A minoglycoside resistant mutants of
Pseudomonas aeruginosa deficient in nitrite
reductase, cytochrome and aerobic transport
Antimicrob. Agents Chemother; Vol. 19.
p. 958-64.

Burdett, W.J. (1963) :

Methodology in Basic Genetics

Holden-Day, Inc., San.

Francisco. p. 10.

Buvinger, W., Stone, L. and Heath, H. (1981) :

Biochemical Genetics of Tryptophan

synthesis in *Pseudomonas aeruginosa*.

J. Bacteriol. Vol. 147. p. 62 - 68.

Catlin, P.W. and Cunningham, L.S. (1961):

J. Gen. Microbiol. 26 : 303.

Cited by Burdett, W.J. Methodology in

Basic Genetics. 1963. Holden-Day, Inc.,

San Francisco. p. 110.

Cavalli-Sforza, L.L. and Lederberg, J. (1956) :

Isolation of preadaptive mutants in

bacteria by sib selection.

Genetics. 41 : 367.

Cerda-Olmeda, E.; Hanwalt, P.C. and Guerola, N. (1968):
Mutagenesis of replication point by
Nitrosoguanidine map and pattern of replication
of E. Coli. Chromosome.
J. Mol. Biol. 33 : 705.

Chakrabarty, A.M. (1976) :
Plasmids in Pseudomonas.
Annu. Rev. Genet. Vol. 10 (7 - 30).

Chandr, P.; Wacker, A.; Sussuth, R. and Lingens, F.
(1967):
Mut. Res. 3 : 1273.
Cited by Craddock, V.M. The reaction of
N methyl-N-nitro-N-nitrosoguanidine with DNA.
Biochem. J. (1968), 106 : 921.

Chandler, P. and Krishanpillia, V.(1977):
Characterization of Pseudomonas aeruginosa
depressed R-plasmids.
J. Bacteriol. Vol. 130. p. 526 - 603.

Chaudhary, K.; Lakshminarayana, K.; Dev, L.K. and

Vyes, S.R. (1974) :

Nitrosoguanidine induced mutation of
Aspergillus niger.

Indian J. Microbiol. 14 : 35.

Coetzee, J.N. and Sacks, T.G. (1960) :

Intrastrian transduction in *Proteus*
mirabilis.

Nature (London) 185 : 869.

Craddock, V.H. (1968) :

The reaction of N-methyl-N-nitro-N-nitro-
soguanidine. with DNA.

Biochem. J. 106 : 921.

Crick, F.H.C.; Barnett, L.; Brenner, S. and Watts-

Tobin, R.J. (1961) :

General nature of the genetic code for
proteins. Nature (London).

192 : 1227.

Cruickshank, R.; Dugid, J.P.; Marmion, B.P. and Swan,
R.H. (1975) :

Medical Microbiology. The practice of medical
microbiology. Churchill Livingstone.

Edinburg. London and New York 12th. ed.

Cryz, S., Friedman, R. and Iglewski, B. (1980) :

Isolation and characterization of a pseudomonas
aeruginosa mutant producing a nontoxic,

immunologically crossreactive toxin A protein

Proc. Nat. Acad. Sci. USA Vol. 77.

p. 7199 - 7203.

Culbertson, M. (1941) :

J. Lab. Clin. Med. 26 : 1465.

Cited by Albert, A.

The acridines, their preperation, physical,
chemical and biological properties and uses.

1951, Eward Arnold and Co. London. p. 231.

Darlington, C.D and Koller, P.C. (1947) :

The chemical breakage of chromosomes.

Heridity (London) 1 : 187.

Dawson, M.H. and Sia, R.H.P. (1931) :

Technique for inducing transformation of
pneumococcal types in vitro.

J. Exp. Med. 54 : 681.

Delic, V. (1968) :

Mutagenesis by M-methyl-N-nitro-N-nitrosoguanidine.
in streptomyces.

Internat. Symp. for Genetics and Breeding of
streptomyces.

Debrowinic. p. 39.

Demerec, M. (1946) :

Induced mutations and possible mechanisms
of the transmission of heredity in E. coli.

Proc. Nat. Acad. Sci., Wash. 32 : 36.

Eisentark, A.; Eisentark, R. and VanSickly, R.

(1965) :

Mut. Res. 2 : 1.

Cited by Delic, V. Genetics and Breeding
of Streptomyces. 1968.

Internat. Symp. Debrowinic. p. 30.

Fennewald, M.; Benson, S. and Shapiro J.

Insertion element analysis and mapping of
the *Pseudomonas* plasmid.

J. Bact. Vol. 134. p. 90 - 952.

Fincham, J.R.S. and Day, P.P. (1963) :

Fungal Genetics. 1st Edition Blackwell.

Scientific Publication, Oxford. P.

219-240.

Finkelstein, I.F. and Weinstein, I.B (1967):

J. Biol. Chem. 242:3763.

Cited by Balis, M.E. Antagonists and

Nucleic acids. 1968. North-Holland.

Publishing Company, Amsterdam. P. 228.

Fishbein, L.; Flamm, W.G and Falk, H.K.(1970) :

Chemical mutagens, Enviromental effect on
biological systems.

Academic Press,

New york and London.

Free E. (1959) :

The difference between spontaneous and base
analogue-induced mutations of phage T 4.

Proc. Nat. Acad. Sci., Wash. 45 : 622.

Freese, E. (1961) :

Transitions and transversion induced by
depurinating agents.

Genetics. 47 : 540.

Freese, E.; Bautz, E. and Bautz-Freese, E. (1961):

The chemical and mutagenic specificity of
hydroxylamine.

Proc. Nat. Acad. Sci., Wash. 47 : 845.

Freifelder, D.; Davidson, P.F. and Geiduschek,

E.P. (1961) :

Biophys. J. 1:389.

Cited by Balis, M.E. Antagonists and

Nucleic acids. 1968. North-Holland

Publishing Company, Amsterdam.

P. 131.

Godfrey, A.J. and Bryan, L.E. (1982) :

Mutation of *Pseudomonas aeruginosa*
specifying reduced affinity for
penicillin G.

Antimicrob. Agents.

Chemother.; Vol. 21. P. 216 - 223.

Gregory G. and Vasil, M. (1981) :

Isolation and characterization of toxin
deficient mutants of *Pseud. aeruginosa*
J. Bacteriol. Vol. 147. p. 275 - 281.

Griffith, F. (1928) :

Significance of pneumococcal types.

J. Hyg. Comb. 27 : 113.

Hass, D.; Evans, R.; Mercenier, A.; Simon, J. and

Stalon, V. (1979) :

Genetic and Physiological characterization
of *Pseudomonas aeruginosa* mutants affected
in the catabolic ornithine carbamolytransferase
J. Bacteriol Vol. 139. P. 713 - 720.

Hayes; W. (1952) :

Recombination in E. Coli. K₁₂:

Unidirectional transfer of genetic material.

Nature (London) 169 : 118.

Hayes, W. (1964 , 1968) :

The genetics of bacteria and their viruses.

5 th and 6 th Edition, Blackwell Scientific

Publications, Oxford.

Herriott, R.H. (1948) :

Inactivation of viruses and cells by
mustard gas.

J. Gen. Physiol. 32 : 221.

Hershey, A.D., and Chase, M. (1952) :

Independent functions of viral protein and
nucleic acid in growth of bacteriophage

J. Gen. Physiol. 36 : 39.

Herskowitz, I.H. (1969) :

Basic principles of molecular genetics.
Thomas Nelson and Sons. Ltd.
36 Park st. London, W.I, U.K.

Holloway, B.W. and Monk, M. (1960) :

Transduction in *Pseudomonas aeruginosa*.
Nature (London) 184 : 1426.

Holloway, B.W. and Krishanpillai, V. (1975) :

Bacteriophages and bacteriocins. In P.H.
Clarke and M.H. Richmond (ed.) Genetics
and biochemistry of *Pseudomonas*. John
Wiley & Sons, London.

Hoshino, T. and Nishio, K. (1982) :

Isolation and characterization of a
Pseudomonas aeruginosa mutant defective
in the structural gene for the leucine,
isoleucine, valine, alanine and thyronine
binding protein.

J. Bacteriol. Vol : 151. P. 729 - 736.

Hoshino, T; Tsuda, M, Iino, T; Nishio, K. and Kageyama,

M. (1983) :

Genetic mapping of genes affecting branched-chain amino acid transport in *Pseudomonas aeruginosa*.

J. Bacterial. Vol. 153. P. 1272 - 1281.

Hotchkiss, R.D. (1974) :

Double marker transformations as evidence of linked factors.

desoxyribonucleate transforming agents.

Proc. Nat. Acad . Sci., Wash. 61 : 554.

Jacob, F. (1955) :

Transduction of Pysogeny in *E. Coli*.

Virology. 1 : 207.

Jacoby, G.A. (1979) :

Pseudomonas aeruginosa clinical manifistations of infection and current therapy.

Nature (London). 274 : 179 - 180.

Jillian, H; Iseac B. and Holloway, B.W. (1972) :

Control of arginine biosynthesis in
pseudomonas aeruginosa.

J. of General Microbiology. Vol. 73.

P. 427 - 438.

Kay, W. and Gronlund A. (1971) :

Transport of aromatic amino acids by
Pseudomonas. aeruginosa.

J. Bacteriol. Vol. 105. p. 1034 - 1046.

Kleinwachter, V. and Koudelka, J. (1964) :

Biochem. Biophys. Acta. 91 : 539.

Cited by Balis, M.E. Antagonists and

Nucleic acids. 1968. North-Holland

Publishing company, Amesterdam.

P. 131.

Kung, M.C. and Lee, B.T.O. (1974) :

Genetic analysis of radiation sensitive and
Chemical sensitive mutants of *Pseudomonas*
aeruginosa.

Mutat. Research. 27 : 191 - 199.

Lamanna, C., Mallette, M. and Zimmerman, L (1973):
Basic Bacteriology. Its Biological and
Chemical Background.
Printed by Waverly Press, Inc. Baltimore,
Md. 21202 U.S.A. 4th ed.

Lederberg, J. and Tatum, E.L. (1946) :
Gene-recombination in E. Coli.
Nature (London) 158 : 558.

Lederberg, J. (1949) :
Abberant heterozygots in E. Coli.
Proc. Nat. Acad. Sci., Wash.
35 : 178.

Lederberg, J. (1950) :
Isolation and characterization of biochemical
mutants of bacteria. In Methods in Medical
Research (ed. J.H. Comrie, Inr.), Vol.3.
Year Book Publishers, Chicago P. 5.

Lederberg, J.; Lederberg, E.M.; Zinder, N.D. and
Lively, E.R. (1951) :
Recombination analysis of bacterial heridity
Cold spr. Harb. Symp Quant. Biol.
16 : 413.

Lederberg, J. (1951) :
Streptomycin resistance : a genetically
recessive mutation.
J. Bacteriol. 61 : 549.

Lederberg, J. and Lederberg, E.M. (1952) :
Replica plating and indirect selection of
bacterial mutants.
J. Bacterial 63 : 399.

Lee, B.T.O., and Holloway B.W. (1965) :
The genetic control of radio-sensitivity in
Pseudomonas aeruginosa.
Radiat. Res. 25 : 68 - 77.

Leith, J.D. (1963) :

Biochem. Biophys. Acta. 72 :643.

Cited by Balis, M.E. Antagonists and

Nucleic acids. 1968. North-Holland

Publishing. Company, Amesterdam. p. 131.

Lennette, E.H., Spaulding, H and Traunt, J.P. (1974) :

Mannual of clinical microbiology 1st Ed.

American socity for Microbiology.

Lennox, E.S. (1955) :

Transduction of linked genetic characters

of the host by bacteriophage P₁

Virology, 1 : 190.

Lerman, L. S. (1961) :

Structural considerations in the inter-
action of DNA and acridines.

J. Mol. Biol. 3 : 18.

Lerman, L.S. (1964) :

Acridine mutagens and DNA structure.

J. Cell. Comp. Physiol. 64 : 118.

Lingens, F. and Oltmans, O. (1966) :

Z. Nature 216 : 666.

Cited by Calam, C.T. Methods in Microbiology.

1970. Acad. Press.

London. Vol. 3A , P. 442.

Litmann, A. Ephrussi, P and Taylor, S. (1959) :

Inactivation et mutation des facteurs genetiques
de l'acide desoxyribose-bonucleique du
pneumocoque par l'UV et par l'acide nitreux.

C.R. Acad. Sci., Paris, 249 (305, 337).

Cited by Hayes, W : The Genetics of Bacteria
and their Viruses 5th Edition, 1964.

Blackwell Scientific Publications, Oxford

P. 316.

Loutit, J.S. (1958) :

A transduction-like process within a single strains of *Pseudomonas. aeruginosa* .

J. Gen. Microbiol. 18 : 315.

Loveless, A. (1966) :

Genetic allied effects of alkylating agents
Butterworth, London. Holland Publishing
Company, Amesterdam P. 177.

Luria, S.E. and Delbruck, M. (1943) :

Mutations of bacteria from viruses
sensitivity to virus resistance
Genetics. 28 : 491.

Malling, H.V. and de Serres, F.J. (1967) :

Relation between complementation patterns
and genetic alteration in nitrous acid-
induced ad- 3B mutants in *N. crassa*.
Mutat. Res. 4 : 425.

Malling, H.V. and de Serres, F.J. (1969a) :

N-methyl-N-nitro-N-nitrosoguanidine

as a mutagenic agent for *N. Crassa*.

Annual information meeting, Biology

Division, Oak Ridge.

National Laboratory, U.S.A. 82 - 83.

Malling, H.V. and de Serres, F.J. (1969b) :

Relationship between carcinogenicity and

mutagenicity of methylating compounds

Annual information meeting, Biology.

Division, Oak Ridge.

National Laboratory, U.S.A. 83.

Mandell, J.D. and Greenberg, J. (1960) :

Biochem. Res. Commun. 3 : 575.

Cited by Craddock, V.M. The reaction of

N-methyl-N-nitro-N-nitrosoguanidine

with DNA.

Biochem. J. (1968), 106 : 921.

McCarty, M. and Avery, O.T (1946):

Studies on the chemical nature of the
substance inducing transformation of
pneumococcal types II.

J. Exp. Med. 83 : 89.

Meselson, M. & Stahl, F. (1958) :

The replication of DNA.

Cold Spr. Harb. Symp. quant. Biol.

23 P. 243.

Miller, R. and Chao-Min, C. (1978) :

Characterization of *Pseudomonas aeruginosa*
mutants deficient in the establishment of
lysogeny.

J. Bacteriol. Vol. 134. P. 875 - 883.

Mindich, L.; Cohen, J. and Weisburd, M. (1978) :

Isolation of nonsense suppressor
mutants in *Pseudomonas*.

J. Bacteriol. Vol. 126. P. 177 - 182.

Motie, T.C. Doyle-Huntzinger, D; Craven, R.C. and
Holder, N. (1982) :

Loss of virulence associated with absence
of flagellum in a mutant of *P. pyocyanea*
in the burned-mouse.

Infect. Imm : Vol. 38.

Morse, M.L. (1954) :

Transduction of certain loci in *E. Coli* k-12
Genetics 39 : 984.

Morishita, Y. and Shimizu, T. (1983) :

Promoting effect of intestinal *Pseudomonas*
aeruginosa on gastric tumorigenesis in rats
with N-methyl-N-nitro-N-nitrosoguanidine
Cancer Lett, Vol. 17. P. 347 - 58.

Nasim, A. (1967) :

The induction of replicating instabilities
by mutagens in *S. pombe*.

Mutat. Res. 4 : 753.

Newcombe, H.B. (1949) :

Origin of bacterial variants.

Nature (London) 164 : 150.

Ohman, D., Cryz, S. and Iglewski, B. (1980) :

Isolation and characterization of

Pseudomonas aeruginosa mutant that produces
altered elastase.

J. Bacteriol. Vol. 142. P. 836 - 842.

Okazaki, T. and Kornberg, A. (1964) :

Enzymatic synthesis of deoxyribonucleic
acid.

J. Biol. Chem. 239 : 259.

Pai, C.A. and Marcus-Roberts, H. 1981.

Genetics its concepts and implications

Prentice-Hall, Inc., Englewood Cliffs,

New Jersey 07632.

Peacocke, A.R. and Skerrett, J.N.H. Trans. Faraday.
Soc. 52 : 261.

Cited by Balis, M.E. Antagonists and Nucleic
acids. 1988.

North-Holland Publishing Company,
Amsterdam. P. 131.

Rizk, M.S. (1977) :

Genetic studies on *Klebsiella rhinoscleromatis*
M.D. thesis. Microbiology, Faculty of Medicine,
El-Mansoura University.

Roth, D. and Manjon, M.L. (1969) :

Studies a specific association between
acriflavine and DNA in intact cells.
Biopolymer 7 : 695.
Biol. Abs. 1970. 46778 .

Salcher, D. and Lingens, F. (1980) :

Isolation and characterization of a mutant
of *Pseudomonas aeruginosa* with an increased
capacity for synthesis of pyrolontrin.

J. Gen. Microbiol. Vol. 118. P. 509 - 513.

Shaer, M. and Rizk, M.S. (1981) :

Local acriflavine, a new therapy for
Rhinoscheroma.

J. of larynegeology & Otology. Vol. 95
P. 701 - 706.

Sokatch, J.R. and Ferretti, J.J. (1976) :

Basic bacteriology and genetics.
Year book medical publishers.

Spizigens, J. (1958) :

Transformation of a biochemically deficient
strain of *B. subtilis* by deoxyribonucleate.

Proc. Nat. Acad. Sci., Wash. 44 : 1072.

Stockers, B.A., Zinder, N.B. and Lederberg, J.

(1953) :

Transduction of flagellar Characters.

J. Gen. Microbiol. 9 : 410.

Suzuki, T. and Tetsuo, I. (1980) :

Isolation and characterization of multi-flagellate mutants of *Pseudomonas aeruginosa*.

J. Bacteriol. Vol. 143. P. 1471 - 1479.

Tamarin, R.H. (1982) :

Principles of Genetics, 1st ed. Willard Grant. Press. P. 512 - 517 .

Topley, W.W.C. and Wilson, G.S. (1975) :

Principles of Bacteriology and Immunity.

6th Editions Edward Arnold Ltd., London.

P. (500 - 509).

Trautner, T.A.; Swartz, M.N and Kornbergs. (1962) :

Enzymatic synthesis of deoxyribonucleic acid.

Proc. Nat. Acad, Sci., Wash., 48 (303).

Tsuda, M., Oguchi, T. and Iino, T. (1981) :

Analysis of flagellor genes in *Pseudomonas aeruginosa* by use of R. plasmids and conjugations.

J. Bacteriol. Vol. 147. P. 1008 - 1014.

Vielmetter W. & Schuster, H. (1960) :

The base specifity of mutation induced by nitrous acid in phage T₂

Biochem. biophys. Res. Comm., 2, 324 (305, 310, 311).

Waltho, J. (1972) :

Genetic analysis of Phenylalanine-responiding mutants of *Pseudomonas aeruginosa*.

J. Bacteriol. Vol. 112. P. 1070 - 1075.

Ward, C.B. and Glaster, D.A. (1969) :

Evidence for multiple growing points on
the genome of rapidly growing E. Coli. B/r.
Proc. Nat. Acad. Sci. Wash. 63 : 800.

Watson, J.D. and Crick, F.H.C. (1953a) :

The structure of DNA.
Cold. Spr. Harb. Symp. Quant. Biol. 18 : 123.

Watson, J. D. and Crick, F.H.C. (1953b) :

Genetic implications of the structure of DNA.
Nature (London) 171 : 964.

Watson, J.M., and Holloway B.W. (1978) :

Linkage map of P. aeruginosa.
J. Bact. Vol. 136 (507 - 521).

Westergaard, M. (1957) :

Chemical mutagenesis in relation to the concept of the gene.

Experientia, 13 : 224.

Cited by Hayes, W. The Genetics of Bacteria & their viruses.

5 th Edition, 1964. Blackwell Scientific Publications, Oxford. P. 203.

Westrum, F.M. and Vigrusson, N.V. (1973) :

A method of nitrosoguanidine mutagenesis of *N. crassa*.

Neurospora News Letter, June p. 35.

Willims, P. and Murray, K. (1974) :

Metabolism of benzoate and the methyl benzoates by *Pseudomonas*.

J. Bacteriol. Vol. 120. P. 416 - 423.

Wollman, E.L., Jacob, F. and Hayes. W (1956) :
Conjugation and genetic recombination in
E-coli.
Cold. Spr. Harb. Symp. Quant.
Biol. 21 : 141.

Zelle, M.P. and Lederberg, J. (1951) :
Single cell isolations of diploid hetero-
zygous. E. Coli.
J. Bacteriol. 61 : 351.

Zinder, N.D. and Lederberg, J. (1952) :
Genetic exchange in Salmonella.
J. Bacteriol. 64 : 679.

Zinder, N.D. (1953) :
Infective hereditary in bacteria.
Cold Spr. Harb. Symp. Quant. Biol.
18 : 261.