



Abou - Jaoude', A., Chippaux, M., Pascal, M.C., and Casse, F.

"Formate : a New Electron Donor for Nitrite Reduction in Escherichia coli K 12" Biochemical and Biophysical Research Communication. 78 (1977) : 579 - 584.

Bachman, B.J., and Low, K.B. "Linkage Map of Escherichia coli K-12" Microbiological Reviews. 44(1980); 1:56.

Brown, T.D.K., Jones - Mortimer, M.C., and Kornberg, H.L. "The Enzyme Interconversion of Acetate and Acetyl - Ccoenzyme A in Escherichia coli" Journal of General Microbiology. 102 (1977) : 327 - 336.

Cavalli - Sforza, L.L., and Lederberg, J. "Isolation of Pre-Adaptive Mutants in Bacteria By Sib Selection" Geneties. 41 (1956) : 367-381.

Cole, J.A., and Wimpenny, J. "Metabolic Pathway for Nitrate Reduction in Escherichia coli" Biochimica et Biophysica Acta. 162 (1968) ; 39 - 48.

Cox, J.C., Edwards, E.S., and DeMoss, J.A. "Resolution of Distinct Selenium - Containing Formate Dehydrogenases from Escherichia coli" Journal of Bacteriology. 145 (1981): 1317 - 1324.

Curtiss, R. Gene Transfer, in Manual of Methods for General Bacteriology (Gerhardt, P. ed.) pp. 253-254. American Society for Microbiology, Washington D.C., 1981.

- Enoch, H.G., and Lester, R.L. "The Role of Novel Cytochrome b-Containing Nitrate Reductase and Quinone in the in vitro Reconstruction of Formate - Nitrate Reductase Activity of E. coli" Biochemical and Biophysical Research Communication. 61 (1974):1234 - 1241.
- Enoch, H.G., and Lester, R.L. "The Purification and Properties of Formate Dehydrogenase and Nitrate Reductase from Escherichia coli" Journal of Biological Chemistry. 250 (1975): 6693 - 6705.
- Garvie, E. "Bacterial Lactate Dehydrogenase" Microbiological Reviews. 44 (1980) ; 106 - 139.
- Goldberg, R.B., Bender, R.A., and Streicher, S.L. "Direct Selection for P<sub>1</sub> - Sensitive Mutants of Enteric Bacteria" Journal of Bacteriology. 118 (1974) : 810 - 814.
- Gorini, L., and Kaufman, H. "Selecting Bacterial Mutants by the Penicillin Method" Science. 131 (1960) : 604 - 605.
- Gray, C.T., Wimpenny, J., Hughes, D., and Mossman, M. "Regulation of Metabolism in Facultative Bacteria. I Structural and Functional Changes in Escherichia coli Associated with shifts between the Aerobic and Anaerobic States" Biochimica et Biophysica Acta. 117 (1966) : 22-31.
- Hadjipetrou, L.P., and Stouthamer, A.H. "Energy Production during Nitrate Respiration by Aerobacter aerogenes" Journal of General Microbiology. 38 (1965) : 29 - 34.

- Hong, J., and Ames, B.N. "Localized Mutagenesis of Any Specific Small Region of the Bacterial Chromosome" Proceedings of the National Academy of Sciences. 68 (1971) : 3158 - 3162 .
- Kemp, J.D., and Atkinson, D.E. "Nitrite Reductase of Escherichia coli Specific for Reduced NAD" Journal of Bacteriology. 92 (1966): 628 - 634.
- Konings, W.N., and Boonstra, J. Anderobic Electron Transfer and Active Transport in Bacteria, in Current Topics in Membranes and Transports (Bronner, F., and Kleinzeller, A. eds) Vol 9. pp 177 - 231, Academic Press, New York, 1977.
- Lehninger, A.L. in Biochemistry, Worth Publisher, New York, 1975.
- Lester, R.L., and DeMoss, J.A. "Effects of Molybdate and Selenite on Formate and Nitrate Metabolism in Escherichia coli" Journal of Bacteriology. 105 (1971) : 1006 - 1014.
- Lowry, O.H., Rosebrough, N.J., Lewis, F.A., and Randall, R.J. "Protein Measurement with the Folin Phenol Reagent" Journal of Biological Chemistry. 193 (1951) : 265 - 275.
- Luria, S.E., Adams, J.N., and Teng, R.C., "Transduction of Lactose Utilizing Ability among Strains of Escherichia coli and Shigella dysenteriae and the Properties of the Transducing Phage Particles" Virology. 12 (1960) : 348 - 390.

Luria, S.E., and Delbriick, M. "Mutations of Bacteria from Virus Sensitivity to Virus Resistance" Genetics. 28 (1943) ; 491 - 511.

Macy, J., Kulla, H., and Gottschalk, G. " $H_2$ - Dependent Anaerobic Growth of Escherichia coli on L-Matate : Succinate Formation" Journal of Bacteriology. 125 (1976) : 423 - 428.

Miller, J.H. in Experiments in Molecular Genetics, Cold Spring Harbor Laboratory, 1972.

Pascal, M.C., Chippaux, M., Abou - Jaoude', A., Blaschkowski, H.P., and Knappe, J. "Mutants of Escherichia coli K-12 with Defects in Anaerobic Pyruvate Metabolism" Journal of General Microbiology. 124 (1981) : 35 - 42.

Peck, H.D, Jr., and Gest, H. "Formic Dehydrogenase and Hydrogenlyase Enzyme Complex in Coli-Aerogenases Bacteria" Journal of Bacteriology. 73 (1957) : 706 - 721.

Ruiz - Herrera, J., and Alvarez, A. "A Physiological Study of Formate Dehydrogenase, Formate Oxidase, and Hydrogenlyase from Escherichia coli K-12" Antonie van Leeuwenhock. 38 (1972) : 479-491.

Ruiz - Herrera, J., and Alvarez, A., and Figueroa, I. "Solubilization and Properties of Formate Dehydrogenases from the Membrane of Escherichia coli" Biochimica et Biophysica Acta. 289 (1972) : 254 - 261.

Ruiz - Herrera, J., and DeMoss, J.A. "Nitrate Reductase Complex of Escherichia coli k-12 : Participation of Specific Formate Dehydrogenase and Cytochrome b<sub>1</sub> Components in Nitrate Reduction" Journal of Bacteriology. 99(1969) : 720 - 729.

Schnaitman, C.A. Cell Fractionation, in Manual of Methods for General Bacteriology (Gerhardt, P. ed.) pp. 55-56, American Society for Microbiology, Washington D.C., 1981.

Sherman, S.M.H., Hennecke, H., and Shanmugam, K.T. "Regulation of Nitrogenase Biosynthesis in Klebsiella pneumoniae : Effect of Nitrate" Journal of General Microbiology. 117 (1980): 169 - 180.

Showe, M.K., and DeMoss, J.A. "Localization and Regulation of Synthesis of Nitrate Reductase in Escherichia coli" Journal of Bacteriology. 95 (1968) : 1305 - 1313.

Snell, F.D., and Snell, C.T. in Colorimetric Methods of Analysis, 3rd ed., Van Nostrand, Princeton, N.J., 1961.

Solomon, E., and Lin, E.C.C. "Mutation Affecting the Dissimilation of Mannitol by Escherichia coli K-12" Journal of Bacteriology. 111 (1972) : 566 - 574.

Streicher, S., Gurney, E., and Valentine, R.C. "Transduction of the Nitrogen Fixation Genes in Klebsiella pneumoniae" Proceedings of the National Academy of Science. 68 (1971) : 1174-1177.

Tait, R.C., Andersen, K., Cangelosi, G., and Shanmugam, K.T. Hydrogenase Genes in Trends in the Biology of Fermentations for Fuels and Chemical (Hollaender, A. ed) pp. 279-303, Plenum Press, 1981.

Thauer, R.K., Jungermann, K., and Decker, K. "Energy Conservation in Chemotrophic Anaerobic Bacteria" Bacteriological Reviews. 41 (1977) : 100 - 180.

Wimpenny, J., and Cole, J.A. "The Regulation of Metabolism in Facultative Bacteria. III. The Effect of Nitrate" Biochimica et Biophysica Acta. 148(1967): 233-242.



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