

REFERENCES

1. West, E.S., Todd, R.W., Massen, H.S., Van Bruggen, J.T. 'Text Book of Biochemistry', 4th ed., The Macmillan Co. New York p.796-801. 1967.
2. The Association of Vitamin Chemists Inc., 'Methods of Vitamin Assay' 2nd ed. Interscience publication. New York. p.205. 1951.
3. Robinson, F.A., 'The Vitamin B Complex', Chapman and Hall Ltd. London. p.348-350. 1950
4. Brown, G.M., J. Biol. Chem. 234: 379. 1959.
5. Brown, G.M., J. Biol. Chem. 234: 370. 1959.
6. Alberts, A.W., Goldman, P., Vagelos, P.R., J. Biol. Chem. 238: 557. 1963.
7. Goldman, P., Alberts, A.W., and Vagelos, P.R., J. Biol. Chem. 238: 1255. 1963.
8. Goldman, P., Alberts, A.W., and Vagelos, P.R., J. Biol. Chem. 238: 3579. 1963.
9. Majerus, P.W., and Vagelos, P.R., Federation Proc. 23: 166. 1964.
10. Majerus, P.W., Alberts, A.W., and Vagelos, P.R., Proc. Natl. Acad. Sci. USA. 51: 1231. 1964.
11. Alberts, A.W., Majerus, P.W., Talamo, B., and Vagelos, P.R., Biochemistry 3: 1563. 1964.
12. Das, D.N., and Toennies, G., J. Bacteriol. 98: 898. 1969.
13. Lipmann, F., Kaplan, N.O., Novelli, G.D., Tuttle, L.C., and Guirard, B.M., J. Biol. Chem. 167: 869. 1949.
14. Lynen, F., Reichert, E., and Rueff, L., Ann. Chem. 574: 1. 1951.

15. Deuel, H.J., 'The Lipids' vol 3 (Biochemistry, Biosynthesis, Oxidation, Metabolism and Nutritional value). Interscience pub. Inc. p.27, 1957.
16. Wakil, S.J., and Bressler, R.J., Biol. Chem. 237: 687. 1962.
17. Wakil, S.J., Pugh, E.L., and Sauer, F., Proc. Natl. Acad. Sci. USA. 52: 106. 1964.
18. Pugh, E.L., and Wakil, S.J., J. Biol. Chem. 240: 4727. 1965.
19. Vagelos, P.R., J. Biol. Chem. 238: 557. 1963.
20. Majerus, P.W., Alberts, A.W., and Vagelos, P.R., J. Biol. Chem. 240: 4723. 1965.
21. Alberts, A.W., and Vagelos, P.R., J. Biol. Chem. 241: 520L. 1966.
22. Overath, P., and Stumpf, P.R., Federation Proc. 23: 166. 1964.
23. Simoni, R.D., Criddle, R.S., and Stumpf, P.K., J. Biol. Chem. 242: 573. 1967.
24. Ailhand, G.P., Vagelos, P.R., and Goldfine, H., J. Biol. Chem. 242: 4459. 1967.
25. Goldman, P., Alberts, A.W., and Vagelos, P.R., Biochim. Biophys. Res. Commun. 5: 280. 1961.
26. Alberts, A.W., and Vagelos, P.R., Federation Proc. 20: 273. 1961.
27. Wells, W.W., Schutz, J., and Lynen, F., Proc. Natl. Acad. Sci. USA. 56: 633, 1966.
28. Sauer, F., Pugh, E.L., Wakil, S.J., Delaney, R., and Hill, R.L., Proc. Natl. Acad. Sci. USA. 52: 1360, 1964.
29. Keneda, T., J. Biol. Chem. 239: 993. 1963.
30. Bloch, K., Baronowsky, P., Goldfine, H., Lennarz, W.J., Light, R., Norris, A.T., and Scheuerbrant, G., Federation Proc. 20: 921. 1961.

31. Norris, A.T., Matsumura, S., and Bloch, K., J. Biol. Chem. 239: 3655.1964.
32. Pugh, E.L., Sauer, F., Moseley, W., Toomey, R.E., and Wakil, S.J.; J. Biol. Chem. 241: 2635. 1966.
33. Fulco, A.J., Levy, R., and Bloch, K., J. Biol. Chem. 239: 998.1964.
34. Vagelos, P.R., Majerus, P.W., Alberts, A.W., Larrabee, A.R., and Ailhand, G.P., Federation Proc. 25: 1485. 1966.
35. Lennarz, W.J., Light, R.J., and Bloch, K., Proc. Natl. Acad. Sci. USA. 48: 840.1962.
36. Goldman, P., J. Biol. Chem. 239: 3663. 1964.
37. Holden, J.T., Hild, D., Wong-leung, Y., and Rouser, G., Biochem. Biophys. Res. Commun. 40: 123. 1970.
38. Furukawa, Y., Kimura, S., J. Vitaminol. 18: 213. 1972.
39. Kimura, S., Bitamin (Japan). 42: 95. 1970.
40. Ailhand, G.P., Vagelos, P.R., J. Biol. Chem. 241: 3866. 1966.
41. Yudkin, M.D., Biochem. J. 82: 40. 1962.
42. Vorbeck, M.L., and Marinetti, G.V., Biochemistry. 4: 295. 1965.
43. Macfarlane, M.G., Biochem. J. 79: 4. 1961.
44. Kanfer, J., and Kennedy, E.P., J. Biol. Chem. 239: 1720. 1964.
45. Burger, M.M., Gleser, L., and Burton, R.M., J. Biol. Chem. 238: 2295. 1963.
46. Lennarz, W.J., Nesbitt, J.A., and Reiss, J., Proc. Natl. Acad. Sci. USA. 55: 934. 1966.
47. Macfarlane, M.G., Biochem. J. 80: 45. 1961.
48. Rose, A.H., 'Chemical Microbiology': an introduction to microbiology: 3rd ed. Butterworth pub. London. p.216-223. 1976.

49. Toennies, G., Das, D.N., and Feng, F., J. Bacteriol. 92: 707. 1966.
50. Das, D.N., 'unpublished data'
51. Forrest, W.W., J. Bacteriol., 90: 1013, 1965.
52. Myszkowska, K., Acta Poloniae Phar. 21: 641. 1965.
53. Sure, B., and Ford, Z.W., J. Nutrition. 24: 405. 1942.
54. Stekol, J.A., 'Symposium on Amino Acid Metabolism'. The Johns Hopkins Press, Baltimore, p.509. 1955.
55. Nemeth, A.M., Russel, C.S., and Shemin, D., J. Biol. Chem. 229: 415. 1953.
56. Puddu, P., Buñini, R., and Caldarera, C.M., Experientia. 15: 119. 1965.
57. Salton, M.R.J., 'Ciba Lectures in Microbial Biochemistry - Microbial Cell walls', John Wiley and Sons Inc., New York, London, p.1 -15. 1960.
58. Brock, T.D., 'Biology of Microorganisms' 2nd ed., Prentice Hall Inc. Englewood Cliffs, New Jersey, p.36-43 and 67-172. 1970.
59. Salton, M.R.J., 'The Bacterial Cell wall'. Elsevier, Amsterdam, 1964.
60. Roger, H.J., and Parkins, H.R., 'Cell wall and membranes'. Spen. London. 1968.
61. Davis, D., Dulbecco, R., Eisen, H.N., Ginsberg, H.S., Wood, W.B., McCarty, M., 'Microbiology' 2nd ed., Harper & Row, Publishers Inc. Hagerstown, Maryland, New York. p.107-120. 1973.
62. Oldmixon, E.H., Ziskin, M.C., Shockman, G.D., Eur. J. Biochem. 68: 271. 1976.
63. Park, J.T., and Strominger, J.L., Science. 125: 99. 1957.
64. Stainer, R.Y., Dandorof, M., and Adelberg, E.A., 'The Microbial world' 3rd ed. Prentice Hall Inc. Englewood Cliffs, New Jersey. p.332-50. 1970.

65. Baddiley, J., 'Lipid involvement in cell wall biosynthesis' in 'Polymerization in Biological systems'. Ciba Foundation symposium 7 (New series). Elsevier: Excerpta Medica, North-Holland Associated Scientific Publishers. Amsterdam, London, New York. p. 87-107. 1972.
66. Toon, P., Brown, P.I., and Baddiley, J., *Biochem. J.* 127: 399. 1972.
67. Fitz-James, P.C., *J. Biophys. Biochem. Cytol.*, 8: 507. 1960.
68. Salton, M.R.J., *Ann. Rev. Microbiol.* 21: 424. 1967.
69. Ferrandes, B., Chaix, P., Ryter, A., *Compt. Rend.* 263: 1632. 1966.
70. De Petris, S., *J. Ultrastructural Res.* 19: 45. 1967.
71. Bladen, H., Mergenhagen, S.E., *J. Bacteriol.* 88: 1482. 1964.
72. Birdsell, D.C., Cota-Robbles, E.H., *J. Bacteriol.* 3: 427. 1967.
73. Kabak, H., and Stadtman, E.R., *Proc. Natl. Acad. Sci. USA.* 55: 920. 1966.
74. Rothfield, L., Finkelstein, A., *Ann. Rev. Biochem.* 37: 563. 1966.
75. Salton, M.R.J., *Ann. Rev. Microbiol.* 21: 417. 1967.
76. Ryter, A., *Bacteriol Rev.* 32: 39. 1968.
77. Salton, M.R.J., 'The bacterial membrane' in *Biomembranes*. 1: ed. L.A. Manson, Plenum Press, New York. p.1-65. 1971.
78. Owen, P., and Salton, M.R.J., *Biochem. Biophys. Res. Commun.* 63: 875. 1978.
79. Fitz-James, P.C., *Protides of Biological fluids.* 15: 289. 1967.
80. Salton, M.R.J., and Owen, P., *Ann. Rev. Microbiol.* 30: 451. 1976.
81. Owen, P., and Freer, J.H., *Biochem. J.* 129: 907. 1972.
82. Theodore, T.S., Popkin, T.J., and Cole, R.M., *Prep. Biochem.* 1: 233. 1971.
83. Grulla, E.A., Butter, J.F., King, R.D., and Smith, G.L., *Canad. J. Microbiol.* 13: 1499. 1967..

84. Salton, M.R.J., Schmitt, M.D., Trefts, P.E., *Biochim. Biophys. Res. Commun.* 29: 728. 1967.
85. Zahler, P.H., Wallach, D.E., and Luscher, E.F., *Protides of Biological fluids.* 15: 69. 1967.
86. Nachbar, M.S., and Salton, M.R.J., 'Surface chemistry of Biological system. Plenum Press, New York. p.175-190. 1970.
87. Danielli, J.F., and Davson, H., *J. Cell Comp. Physiol.* 5: 495.1935.
88. Robertson, J.D., *Progr. Biophys.* 10: 343. 1960.
89. 'O'Brien, J.S., *J. Theoret. Biol.* 15: 307. 1967.
90. Toennies, G., and Shockman, G.D., *Proc. Intern. Congr. Biochem., 4th, Vienna,* 13: 365. 1958.
91. Gyorgy, P., 'Vitamin Method', *Acad. Press Inc. Vol I, p.332-339.* 1950.
92. Toennies, G., Shockman, G. D., and Kolb, J.J., *Biochemistry.* 2: 294. 1963.
93. Shockman, G.D., Conover, M.J., Kolb, J.J., Phillips, P.M., Riley, L.S., Toennies, G., *J. Bacteriol.* 81: 36. 1961.
94. Weibull, C., *Biochim et Biophys. Acta.* 2: 351. 1948.
95. Mudd, S., Polevitsky, K., Anderson, T.F., and Chambers, L.A., *J. Bacteriol.* 42: 251. 1941.
96. Salton, M.R.J., *Biochim. Biophys. Acta.* 22: 495. 1956.
97. Salton, M.R.J., and Pavlik, J.G., *Biochim. Biophys. Acta.* 39: 398. 1960.
98. Shockman, G.D., Kolb, J.J., Bakey, B., Conover, M.J., and Toennies, G., *J. Bacteriol.* 85: 168. 1963.
99. Cho. K.V., Salton, M.R.J., *Biochim. Biophys. Acta.* 84: 773. 1964.

100. Law, J.H., 'Bacterial lipids' in 'The Specificity of cell surfaces', ed. B.D. Davis. and L. Warren, Englewood Cliffs, New Jersey, Prentice Hall. p.87-105. 1967.
101. Ibbot, F.A., and Abrams, A., Biochemistry. 3: 2008. 1964.
102. Dezelee, P., and Shockman, G.D., J. Biol. Chem. 250: 6686. 1975.
103. Good, T.A., and Bessman, S.P., Anal. Biochem. 9: 253. 1964.
104. Kolb, J.J., Weinder, M.A., and Toennies, G., Anal. Biochem. 5: 78. 1963.
105. Harris, N.D., and Papat., P., J. Am. Oil. Chem. Soc. 31: 124. 1954.
106. Araki, Y., Nakatani, T., Nakayama, K., and Ito, E., J. Biol. Chem. 247: 6312. 1972.
107. Kelemen, M.V., and Rogers, H.G., Proc. Natl. Acad. Sci. USA. 68: 992. 1971.
108. Salton, M.R.J., Relation between Str. and Func. in the Prokaryotic cell' - 'Symposia of the society for General Microbiology' NO. 28: p.201-223. 1978. Published in Great Britain.
109. Duguid, J.P., and Wilkinson, J.F., 'Microbial Relation to Environment' - 'Symposium of the Soc.. for Genexal Microbiology' NO. 11: published by the Soc. of Gen. Microbiology at the University Press Cambridge, p. 69-99. 1961.
110. Henning, U., Dennert, G., Rehn, K., and Deppe, G.J., J. Bacteriol. 98: 784. 1969.
111. Grulla, E.A., and Hopfer, R.L., Biochim. Biophys. Acta. 255:822.1972.
112. Hendler, W., Nature. 207: 1053. 1965.
113. Yamamoto, S., and Lampen, J.O., ~~Matk~~ Proc. Natl Acad. Sci. USA. 73: 1457. 1976.



114. Brumfitt, W., Wardlaw, A.C., and Park, J.T., J. Gen. Microbiol. 41: 225. 1958.
115. Hayashi, H., Araki, Y., and Ito, E., J. Bacteriol. 113: 592. 1973.
116. Holden, W.T., and van Balgoey, J.N.A., Biochem. Biophys. Res. Commun. 19: 401. 1965.
117. Reusch, V.M., Jr., and Burger, M.M., Biochim. Biophys. Acta. 300: 79. 1973.
118. Kodicek, E., 'Biochemical problems of lipids' ed. G. Papjak and E. LeBriton. Butterworth Sci. Pub. London. p401-406. 1956.
119. Campbell, P.N., and Sargen, J.R., 'Techniques in protein biosynthesis', vol.I. p.299. 1967.
120. Burton, K., Biochem. J. 62: 315. 1956.
121. Toennies, G., Feng, F., Kolb, J.J., and Luttner, P.M., 'Anal. Biochem'. 11: 473. 1965.
122. Spirin, A.S., Biokhimiye. 23: 656. 1958.
123. Society of American Bacteriologists ed. 'Manual of microbiological methods'. McGraw Hill Book Co. New York, Toronto. London. p.13.1957.
124. Grula, E.A., and Smith, G.L.J., J. Bacteriol. 90: 1054. 1965.
125. King, R.D., Grula, E.A., Canad. J. Microbiol. 18: 519. 1972.
126. Grula, E.A., and Grula, H.M., Biochem. Biophys. Res. Commun. 17: 341. 1964.
127. Grula, E.A., and King, R.D., Canad. J. Microbiol. 16: 317. 1970.
128. Holden, J.T., and Bunch, J.M., Biochem. Biophys. Res. Commun. 46: 437. 1972.
129. Shockman, G.D., Thompson, J.S., and Conover, M.J., J. Bacteriol. 90: 575. 1965.

130. Shockman, G.D., Trans. N.Y. Acad. Sc. Ser. 2.26: 182. 1963.
131. Shockman, G.D., Thompson, J.S., and Conover, M.J., J. Bacteriol. 90: 575. 1965.
132. Park, J., and Geyorgy, T., Symp. Soc. Gen. Microb. 8: 49. 1958.
133. Springer, E.L., and Roth, I.L., Can. J. Microb. 18: 219. 1972.
134. Das, D.N., Chaudhuri, B., Das, T., 'Unpublished observations'.
135. Kellenberger, E., Ryter, A., and Sechaud, J., J. Biophys. Biochem. Cytol. 4: 671. 1958.
136. Higgins, M.L., Pooley, H.M., and Shockman, G.D., J. Bacteriol. 103: 504. 1970.
137. Higgins, M.L., in A.I. Laskin and Lechevalier (ed.), CRC Handbook of Microbiology. vol.I. CRC Press Cleveland. p.686-689. 1973.
138. Das, D.N., and Chowdhury, B., 'Personal Communication'.