



## BIBLIOGRAPHY

1. Adelstein, S.J; Coombs, T.L; and Valee, B.L: "Matalloenzymes and myocardial infarction. The relation between serum copper and ceruloplasmin and its catalytic activity" New Engl. J. Med. 255(1956): 105.
2. Adelstein, S.J; and Valee, B.L: "Copper In Mineral Metabolism, II B" C.L. Commar and F. Bronner (Eds.), New York: Academic Press, p. 371, (1962).
3. Akerfeld, S: "Oxidation of N, N-dimethyl-p-phenylene-diamine by serum from patients with schizophrenia and mental disease". Science 125(1957): 117.
4. Allison, A.C, and ap Rees, W: Brit. Med. J. II(1957): 1137.
5. Allison, A.C; Blumberg, B.S; and ap Rees, W: Nature 181(1958): 824.
6. Barass, B.C; and D.B. Coulth: Biochem. Pharmac. 21(1972): 677.
7. Bates, C.W; and M.R. Schlaback: "The reaction of ferric salts with transferrin". J. Biol. Chem. 248(1973): 3228-3232.
8. Baumstark, J.S; R.J. Laffin, and W.A. Bardawil: "A preparative Method for the Separation of 7S Gamma Globulin from Human serum". Biochim. Biophys. 108(1964): 514-522.
9. Bearn, A.G: Am. J. Med. 22(1957): 747.
10. Bearn, A.G; and Kunkel, H.G: J. Clin. Invest. 31(1952): 616

11. Bearn, A.G; and Kunkel, H.G: "Localization of Cu<sup>64</sup> in serum fractions following oral administration. An alteration in Wilson's disease". Proc. Soc. Exper. Biol. and Med. 85(1954): 44.
12. Becker, W., H.G. Schwick and K. Storiko: Laboratory Notes for Medical Diagnostics, Lucius & Bruning (ed.) Frankfurt (1969).
13. Bissell, D.M; Hammaker L, and Schmid R: "Blood 40(1972): 812-822.
14. Bjoerring, H. Vox Sang 6 (Nov-Dec)(1963): 641-59.
15. Black, J.A; Dixon, G.H: "Amino acid Sequence of Alpha chains of Human Haptoglobins". Nature 218(1968): 736-741.
16. Boussier G: Compt. rend. acad. Sci. Paris, 246(1968): 1769.
17. Broman, L.: Nature, 182(1958): 1655.
18. Broman, L.: "The function of ceruloplasmin-a most question. In": Molecular basis of some Aspects of Mental Activity, Vol. 20, O. Walass (ed.). Academic Press, New York, p. 131-145, (1967).
19. Broman L, and K. Kjellin: Biochim. Biophys. Acta., 82(1964): 101.
20. Bunn H.F.: J. Lab. Clin. Med. 70(1967): 606.
21. Bunn H.F. and Jandl JH. J. Exper. Med. 129(1969): 925-934.

22. Bush, J.A; Mahoney, J.P. Gubler, C.J; Cartwright, G.E; and Wintrobe, M.M.: "Studies on copper metabolism. XXI The transfer of radiocopper between erythrocytes and plasma". J. Lab. and Clin. Med. 47(1956): 898.
23. Campbell, D.H., and Weliky, N: Methods in Immunology and Immunochemistry, C.A. Williams and M.W. Chase (ed.) Academic Press, New York, p. 365 (1965).
24. Cartwright, G.E: "Copper metabolism in human subjects in Copper Metabolism". A Symposium on Animals, Plants and soil Relationships, McElroy, W.D; and Glass, B, (ed.). The Johns Hopkins Press Baltimore, p. 274-314 (1950).
25. Cartwright, G.E; Hodges, R.E; Gubler, C.J; Mahoney, J.P; Daum, K; Wintrobe, M.M; and Dean, W.B: "Studies on copper metabolism. XIII Hepatolenticular degeneration". J. Clin. Invest. 33(1954): 1487.
26. Cartwright, G.E; Markowitz, H; Shields, G.S; and Wintrobe, M.M: Studies of copper metabolism XXIX. "A critical analysis of serum copper and ceruloplasmin concentration in normal subjects, patients with Wilson's disease and relatives of patients with Wilson's disease". Amer. J. Med. 28(1950): 555.
27. Cartwright, G.E, and Wintrobe, M.M: "The anemia of infection XVII." A review. Advances Int. Med. 5(1952): 165.

28. Cleve, H; Gordon, S. Bowman, B.H; and Bearn, A.G: "Comparison of the tryptic peptides and amino acid composition of the beta polypeptide chains of the three common haptoglobin phenotypes". Amer. J. Hum. Genet. 10(1967): 713-721.
29. Cohn, E.J; et al. J. Am. Chem. Soc. 68(1946): 459.
30. Connell, G.E; Dixon G.H; and Smithies, O. Nature 193(1962): 505-506.
31. Connell, G.E; and O. Smithies: Biochem. J. 72(1959): 115.
32. Connell, G.E; and R.W. Shaw: Can. J. Biochem. Physiol. 39(1961): 138.
33. Crosby, W.H; and Dameshek, W: J. Lab. Clin. Med. 38(1951): 829.
34. Cuatrecases P, Wilcheck M, and Anfinson C.B: "Selective enzyme purification by affinity chromatography". Proc. Natl. Acad. Sci. 61(1968): 636-643.
35. Deutsh, H.F: "A Chromatographic-spectrophotometric method for the determination of ceruloplasmin". Clin. Chim. Acta. 5(1960): 460.
36. H.F. Deutsch, C.B. Kaper and D.A. Walsh. Arch. Biochem. Biophys. (1962): 99.
37. Dyukedzhiyev, I.: Pediatriy (PRB), 10(3)(1971): 200.

38. Edgington TS,: Method adapted from Mancini G, Carbonara A, and Heremans JE: "Quantitation of antigens by single radial immunodiffusion". Immuno. Chem. 2(1965): 234-254.
39. J.L. Fahey, P.F. McCoy and M. Goulian. J. Clin. Invest. 37(1958): 272.
40. J.L. Fahey, P.F. McCoy and A.P. Harbett: J. Clin. Invest. 37(1958): 893.
41. Ferris, TG, Easterling RE, Nelson KJ, et al.: "Determination of serum Hb binding capacity and Hp type by acrylamide gel electrophoresis". AM. J. Clin. Pathol. 46(1966): 385-389.
42. Wunrmann, F., and C. Wunderly: The Human Blood Proteins Grune & Stratton (ed.). New York & London (1960).
43. Fredericq L, "Recherches sur la physiologie du poupe Commun (Octopus vulgaris)". Arch. Zool. Exp. Gen. 7(1878): 535.
44. Freeman, H.C. in : Inorganic Biochemistry, vol. 1, Elsevier New York, pp. 121-166 (1973).
45. Gaber, B.P; and P. Aisen.: "Is divalent iron bound to transferrin?" Biochem. Biophys. Acta. 22(1970): 228-233.

46. Gallagher, C.H; J.D. Judah, and K.R. Rees.: "The biochemistry of Cu deficiency I. Enzymological disturbances blood chemistry and excretion of amino-acids". Proc. Roy. Soc. London ser. B. 145(1956): 134-149.
47. Gordon, S; and Bearn, A.G.: "Hemoglobin binding capacity of isolated haptoglobin polypeptide chains". Proc. Soc. Exp. Biol. Med. 121(1966): 846-850.
48. Gordon, S; Cleve, H; and Bearn, A.G; "An improved method of preparing haptoglobin polypeptide chains using guanidine hydrochloride". Proc. Soc. Exp. Biol. Med. 127(1968): 52-59.
49. Gubler, C.J; Lahey, M.E; Cartwright, G.E, and Wintrode, M.M; "Studies on copper metabolism, IX. The transportation of copper in blood". J. Clin. Invest. 32(1953): 405.
50. Harless, E: Über das blaue Blut einiger wirbellosee Thiere und dessen Kupfergehalt. Müller's Arch. Anat. Physio. 6(1847): 148.
51. Henry R.J; Chiamori, M; Jacobs, S.L; and Segalove, M.: "Determination of ceruloplasmin Oxidase in serum". Proc. Soc. Exp. Biol. Med. 104(1960): 620.
52. Hideo Hamaguchi: Amer. J. Hum. Genet. 21(Sep)(1969): 440-56.
53. Hjerten S.: Biochim. Biophys. Acta. 31(1959): 216.

54. C.G. Holmberg and C.B. Laurell: Acta. Chem. Scand., 2(1948): 550.
55. C.G. Holmberg and C.B. Laurell: Scand. J. Clin. and Lab. Invest. 3(1951): 103.
56. C.G. Holmberg and C.B. Laurell: "Investigations in serum copper.  
III. Ceruloplasmin as an enzyme". Acta. Chem. Scandinav., 5(1951): 476.
57. C.G. Holmberg and C.B. Laurell: "Investigations in serum copper.  
IV. Effect of different anions on the enzymatic activity  
of Cp." Acta. Chem. Scandinav., 5(1951): 921.
58. Holwerda, R.A; and Gray, H.B.: Biochemistry, 3(5)(1976): 112.
59. Jamshid Javid and Joan C. Liang: "The hemoglobin-haptoglobin  
bond I. Dissociation of the complex and recovery of  
the native haptoglobin in an affinity chromatography  
system". J. Lab. Clin. Med. 12(1974): 334.
60. Jayle, M.F.: Bull. Soc. Chim. Biol. 33(1951): 876.
61. Jayle, M.F; and Boussier, G.: Exposes ann. biochem. Med.  
17(1955): 157.
62. Jayle, M.F; and Moretti.: "Haptoglobin: biochemical, genetic  
and physiopathologic aspects". Progr. Hemat. 3(1962):  
343-359.

63. Karl, H., Schosinsky, H. Peter Lahmann, and Myrton F. Beeler:  
"Measurement of Ceruloplasmin from its Oxidase  
activity in serum by use of O-dianisidine Dihydrochloride".  
Clin. Chem. 20(12)(1974): 1556.
64. Karl, H., Schosinsky, H. Peter Lahmann, and Myrton F. Beeler:  
"Measurement of Ceruloplasmin from Its Oxidase activity  
in serum by use of O-Dianisidine Dihydrochloride".  
Clin. Chem. 20(12)(1974): 1556-1563.
65. Keene WR and Jandl JH: Blood 26(1965): 175-179.
66. R. Kluthe, J. Faul, and H. Heimpel.: "Quantitative Estimation  
of Human Serum Haptoglobins by an Immunological Method".  
Nature 205(Jan)(1965): 93-4.
67. Koechlin, B.A.: J. Amer. Chem. Soc. 74(1952): 2649.
68. Kong, S.K. and Shim, B.S. J. Catholic Med. College (Seoul)  
26(1974): 7-19.
69. Kominz D.: Quoted by R.B. Fennell, in F.H. Putnam (Ed.),  
The plasma Proteins. Vol 1, Academic Press, New York,  
p. 24 (1960).
70. Krass S. and Sarcions E.: J. Biochim. Biophys. Acta 90(1964):  
301.
71. Lahey, M.E; Gubler, C.J; Cartwright, G.E, and Wintrobe, M.M:  
"Studies on copper metabolism VII. Blood copper in  
pregnancy and various pathologic states". J. Clin.  
Invest. 32(1953): 329.

72. Laurell, C.B; Clin. Chem. Acta. 4(1959): 479.
73. Laurell, C.B; in F.H. Putnam (Ed.): The plasma Proteins, Vol I, Academic Press, New York, p. 361 (1960).
74. Laurell, C.B; and Nyman, M: Blood 12(1957): 493.
75. Laurell, C.B; and Gronvall C; adv. clin. chem. 5(1962): 135.
76. Lee T.H. et al.: Biochem. Biophys. Res. Commun. 60(1974): 511.
77. Lemberg, R., N. Newton, and L. Clarke. "Decrease of haem a content in the heart muscle of copper-deficient swine". Aust. Jour. Exptl. Biol. 40(1962): 367-372.
78. Leon, L, et al. "Dominant role of the liver in Biosynthesis of the plasma proteins". Advances in Chemistry Series 44, 1962: 326.
79. Lionetti P.J., Valeri C.R., Bond J.C. et al.: "Measurement of IIb binding capacity of human serum or plasma by means of dextran gels". J. lab. clin. Med. 64(1964): 519-528.
80. Lovstad, R.A. Biochem. Pharmac., 23(1974): 1045.
81. Lovstad, R.A. "Kinetic studies on the Ceruloplasmin-Catalyzed oxidation of Phenothiazine derivatives". Biochem. Pharmac. 24(1975): 475-478.
82. Malkin, R. in Inorganic Biochemistry, Vol. 2, Eichorn, (Ed.) Elsevier, New York, pp 689-709, (1973).

83. Markowitz, H., Gubler, C.J., Mahoney, J.P.; Cartwright, G.E.; and Wintrobe, M.M: J. Clin. Invest. 34(1955): 1498.
84. Marmanik and David E. Stage. J. of immu. 106(6) June (1971): 169.
85. McDermott, J.A.; C.T. Huber, S. Osaki, and F. Frieden: "Role of iron in the oxidase activity of Ceruloplasmin". Biochim. Biophys. Acta. 151(1968): 541-557.
86. McKelvey, E.M. and J.L. Fahey: J. Clin. Invest. 44(1965): 1778.
87. Miszkowski, V.S. ~ P.W. Tang, T.G. Spiro, E. Shapiro, and T.H. Moss: "Copper Coordination group in "Blue" Copper proteins: Evidence from Resonance Raman Spectra". Biochemistry, 14(6)(1975): 79.
88. Mercier, M.J., and P.A. Dumont, J. Pharm. Pharmac. 24(1972): 706.
89. Nagel, R.L., and Gibson, Q.H.: "Kinetics and mechanisms of complex formation between hemoglobin and haptoglobin". J. Biol. Chem. 242(1967): 3428-3434.
90. Nagel, R.L., and Gibson, Q.H. J. Biol. Chem. 246(1971): 69.
91. Nakamoto, K.: Infrared Spectra of Inorganic and Coordination compounds, 2nd ed, Wiley, New York, pp 256-258 (1970).
92. Nosslin, B.F., and Nyman, M; Lancet, 1(1958): 1000.
93. Nyman, M; Scand. J. Lab. and Clin. Invest. Suppl. 39(1959): 138.

94. Osaki, S., D.A. Johnson, and E. Frieden. "The possible significance of the ferrous oxidase activity of Cp in normal Human serum". J. Biol. Chem. 241(1966): 2746.
95. Osaki, S; and O. Walass. "Kinetic studies of ferrous ion oxidation with crystalline human ferroxidase. II. Rate constant at various steps and formation of possible enzyme substrate complex". J. Biol. Chem. 242(1967): 2653-2657.
96. Peters, Jr., T. and Peters J.C.: J. Biol. Chem. 247(1972): 3858.
97. Polonovski, M; and Jayle, M.F.: Bull. soc. chim. biol. 21(1939): 66.
98. Porath, J; Axen, R. and Porath: J. Immuno chem. 4(1967): 381.
99. Privalenko, M.N., Z.I. Volkova and T.A. Astakhova. "Study of Ceruloplasmin in Rheumatic fever". Clin. Chim. Acta. 57(1974): 359.
100. Ratcliff, AP, Hardwicke J: "Estimation of serum Hb binding capacity of Sephadex G-100". J. Clin. Pathol. 17(1964): 676-679.
101. Ravin, H.A: "An improved colorimetric enzymatic assay of ceruloplasmin". J. Lab. Clin. Med. 58(1961): 161.
102. Rice, E.W., "Ceruloplasmin assay in serum: Standardization of ceruloplasmin activity in terms of International Enzyme Units". Stand. Methods Clin. Chem. 4(1963): 39.

103. Robbins, J.B., Halmovich J., and Sela M: "Purification of antibodies with immunoadsorbents prepared using bromoacetyl cellulose". Immuno. Chem. 4(1967): 11-22.
104. Robert, L; Bajic, V; and Jayle, M.F: Acad. Sci. Paris, 242(1956): 2868.
105. Roser, H.P.; G.R. Lee, S. Nacht, and G.E. Cartwright. "The role of ceruloplasmin in iron metabolism" J. Clin. Invest. 49(1970): 2408-2417.
106. Rundel, A.R., Clother, B; and Sudell, B. "Haptoglobin Phenotype Frequencies in Mentally Retarded Person". Clin. Chem. 18 (11)(1972): 1368-72.
107. Sanders, B.E., O.P. Miller and M.N. Richard. Arch. Biochem. Biophys. 84(1959): 60.
108. Scheinberg, I.H. and Gitlin, D. Science 116(1952): 484.
109. Scheinberg, I.H. and Sternlieb, I. Copper Metabolism Pharmacol. Rev. 12(1960): 355.
110. Steinbuch, M. Proc. IVth Congr. Intern. Soc. Blood Transfusion Rome (1958).
111. Shields, L, Markowitz, H., Cartwright, G.E. and Wintrobe, M.M: Metal-binding in Medicine, Marvin J. Seven (ed.) Philadelphia (1959).
112. Shim, B. - S. and Bearn, A.G: J. Exp. Med. 120(1964): 611-628.

113. Shim, B. - S. Lee T-H. and Kang Y-S. Nature, Lond. 207(1965): 1264.
114. Shim, B. - S. Yoon, C.S; Oh, S.K; Lee, T.H; and Kang, Y.S; Biochim. Biophys. Acta. 243(1971): 126-136.
115. Smithies, O: "Zone electrophoresis in starch gel: group variations in the serum proteins of normal human adults". Biochim. J. 61(1955): 629-641.
116. Smithies, O; Connell, G.E.; and Dixon, G.H.b.: "Chromosomal rearrangements and the evolution of haptoglobin genes". Nature (London), 196(1962): 232-236.
117. Sobers, H.A. and E.A. Peterson. Federation Proc. 17(1958): 1116.
118. Stokes, R.P.: "A Rapid method for the isolation of ceruloplasmin". Clin. Chim. Acta. 15(1967): 517-523.
119. Storiko, K: Blut. 16(1968): 200.
120. Sunderman, F.W; Jr., and Nomoto, S: "Measurement of human serum ceruloplasmin by p-phenylenediamine oxidase activity". Clin. Chim. Acta. 16(1970): 903.
121. Sutton, H.E.: Prog. Med. Genet. 7(1970): 163-216.
122. Tarukoski PH: "Quantitative spectrophotometric determination of Hp". Scand. J. Clin. Lab. Invest. 18(1966): 80-85.
123. Thorbecke. G.J; Liem H.H; Knight S; Cox K. and Muller Eberhard U.J. Clin. Invest. 52(1973): 725.

124. Tuttle: Science 121(1955): 701
125. Wanda Dobryszycka, David H. Elwyn, John C. Kukral. Biochim. Biophys. Acta. 175(1969): 220-222.
126. White Abraham, Handler Philip, Smith E. Emil: Principles of Biochemistry, McGraw-Hill Book Company, New York, Toronto, London (1964).
127. Williams, D.M., G.R. Lee, and G.E. Cartwright: "Ferroxidase activity of rat ceruloplasmin". Am. J. Phys. 227 (5) (1974): 1094.
128. Williams, D.M., G.R. Lee, and G.E. Cartwright: "Defective mitochondrial iron uptake in copper deficiency". Clin. Res. 20(1972): 185.
129. Wilson, S.S.; Guillan, R.A; and Hocker, V.E: "Automation of ceruloplasmin assay in serum". Amer. J. Clin. Pathol. 48(1967): 524.

## VITA

Name: Chanphen Boonkham.

Date of Birth: December 24, 1941.

Place of Birth: Bangkok, Thailand.

Institution Attended: Saipunya School, Bangkok  
March, 1959. High School Diploma.

University of Medical Sciences, Bangkok  
March, 1964. Bachelor of Science.  
(B.Sc., in Pharm).

## Position and site of the Employee

Scientist of Department of Pathology,  
Mahidol University, Faculty of Medicine  
Ramathibodi Hospital  
Bangkok, Thailand.

