

DAFTAR PUSTAKA

1. Adamowicz P, Coursaget P, Mazert MC, Goudeau A, Lagarde D, and Girard M. Pre-S antigenicity and pre-S immunogenicity of a hepatitis B vaccine. In Nora el Goulli (Ed). Asian Symposium on Strategies for large scale Hepatitis B Immunization. Science Press, Hongkong, 1986. pp.113-117.
2. Almeida JD, Rubenstein D and Stott EJ. New antigen-antibody system in Australia-antigen-positive hepatitis. Lancet ii:1225-1227, 1971.
3. Anderson and Murray-Lyon. Natural History of the HBsAg Carrier. Gut 26:848-860, 1985.
4. Anonim. Hepaccine B injection, Cheil Sugar Co., Ltd. Unpublished data.
5. Anonim. HBV marker in acute and persistent infection. Institute of Immunology Co., Ltd., Japan, 1988.
6. Arkin H and Colton RA. Tables for Statisticians. 2nd edn, Barnes & Noble Books, New York, 1963. pp.22 & 148.
7. Arnon B & Geiger B. Molecular basis of immunogenicity and antigenicity. in Glynn LE & Steward MW (Eds). Immunochemistry, an advanced textbook. John Wiley & Sons, London, 1977. pp.307-364.
8. Bancroft WH, Mundon FK, and Russell PK. Detection of additional antigenic determinant of hepatitis B antigen. J Immunol 109:842-848, 1972.
9. Baraldini M, Faccini A, Miglio F, Ramadori G, Alberti A, and Realdi G. Radioimmunoassay for hepatitis B e antigen and antibody:correlation with viral replication and prognostic value. Vox Sang 41:139-145, 1981.

10. Beasley RP, Hwang L-Y, Lin C-C, and Chen C-S. Hepatocellulare carcinoma and hepatitis B virus. *Lancet* ii:1129-1133, 1981.
11. Ben-Porath E, and Wands JR. Monoclonal antibodies as diagnostic probes in the ethiology of hepatitis. *Seminars in Liver Disease* 4(1):76-88, 1984.
12. Blumberg BS, Alter HJ and Visnich S. A New antigen in leukemia sera. *J Med Association* 191:541-546, 1965.
13. Boyden, S.V.. The Adsorption of protein on erythrocytes treated with tannic acid, and subsequent hemagglutination by antiprotein sera. *J Exp Med* 93: 107-120, 1951.
14. Brahm J, Fagan EA, Budkowska A, Rolando N, O'Gredy J, Pillot J, Williams R, and Eddleston A. Pre-S2 and anti pre-S2 detection in fulminant hepatitis (Abst). *J Med Virol* 2(4):A58, 1987.
15. Budkowska A, Dubreuil P, Capel F, and Pillot J. Hepatitis B virus pre-S gene-encoded antigenic specificity and anti-pre-S antibody:relationship between anti-preS response and recovery. *Hepatology* 6(3):360-8, 1986a.
16. Budkowska A, Riottot MM, Dubreuil P, Lazizi Y, Brechot C, Sobczak E, Petit MA, and Pillot J. Monoclonal antibody recognizing pre-S(2) epitope of hepatitis B virus: characterization of pre-S(2) epitope and anti-pre-S(2) antibody. *J Virol* 20(2): 111-25, 1986b.
17. Budkowska A, Dubreuil P, and Pillot J. Prognostic value of pre-S2 epitope of HBV and anti-pre-S2 response evaluated by monoclonal assay (abstr). *J Med Virol* 21(4):A58, 1987.

18. Budkowska A, Dubreuil P, Gerlich WH, Lazizi Y, and Pillot J. Occurrence of pre-S1 antigen in viremic and nonviremic carriers of hepatitis B surface antigen. *J Med Virol* 26:217-225, 1988.
19. Budkowska A, Dubreuil P, Maillard P, Poynard T and Pillot J. A biphasic pattern of anti-pre-S responses in acute hepatitis B infection. *Hepatology* 12(6):1271-1277, 1990.
20. Burrin DH. Production of antibodies. In Wilson K; Gouling KH (Eds). *A Biologist's Guide to Principles and Techniques of Practical Biochemistry*. 3rd edn, Edward Arnold Pty Ltd. Baltimore, 1986. pp. 121-123.
21. Center for Disease Control. *Laboratory Techniques For The Detection of Hepatitis B Surface Antigen*. HEW Publication No.(CDC) 78-8353. Atlanta 1987,pp.1-47.
22. Chen SH and Howard CR. Properties and stability of the pre-S region of hepatitis B virus. In Zuckerman AJ (Ed). *Viral Hepatitis and Liver Disease*. Alan R. Liss, Inc., New Yorka, 1988. pp.622-626.
23. Chesebro B and Svehag SE. Precipitation of human serum proteins by polyethylene glycol. *Clin Chim Acta* 20:527-529, 1968.
24. Courouce AM, Lee H, Canavaggio M, Drouet J, Girault A, and Soulier JP. Monoclonal anti-HBs antibodies with restricted reactivity (Abstract). in Vyas GN, Dienstag JL, and Hoofnagle JH (eds). *Viral Hepatitis and Liver Disease*. San Fransisco, Grune & Stratton Inc., 1984. p.685.

25. Courouce-Pauty AM, Plancon A. e antigen and anti-e in two categories of chronic carriers of hepatitis B surface antigen. *Vox Sang* 34:231-238, 1978.
26. Courouce-Pauty AM, Plancon A, and Soulier JP. Distribution of HBsAg subtype in the world. *Vox Sang* 44:197-221, 1983.
27. Coursaget P, Barres JP, Chiron JP, and Adamowicz P. Hepatitis B vaccine with and without polymerized albumin receptor. *Lancet* i:1152-1153, 1985.
28. Dane DS, Cameron CH and Briggs M. Virus-like particles in serum patient with Australia-antigen-associated hepatitis. *Lancet* i:695-698, 1970.
29. Dienstag JL. Immunologic mechanism in chronic viral hepatitis. In Vyas GN, Deinstag JL, and Hoofnagle JH (Eds). *Viral hepatitis and liver diseases*. Grune & Stratton Inc., New York, 1984. pp.135-164.
30. Dreesman GR, Hollinger FB, Suriano JR, Fujioka RS, Brunswig JP, and Melnick JL. Biophysical and biochemical heterogeneity of purified hepatitis B antigen. *J. Virol.* 10:469-476, 1972.
31. Dudley FJ, Fox RA, and Sherlock S. Cellular immunity and hepatitis-associated Australia antigen liver disease. *Lancet*, ii:1388-1393, 1972.
32. Eddleston ALWF. Immunological aspect of hepatitis B virus infection. In Zuckerman (Ed). *Viral hepatitis and liver diseases*. Allan R Liss Inc., New York, 1988. pp.603-605.

33. Eddleston ALWF and Dixon B. Interferon in the treatment of chronic virus infection of the liver. Pennine Press, Cheshire, 1990. pp.47-57.
34. Estacio RC, Chavez CC, Okamoto H, Lingao AL, Reyes MT, Domingo E, and Mayumi M. Nucleotide sequence of hepatitis B virus genome of subtype adw isolated from a Philipino:comparison with reported three genomes of the same subtype. *Journal of Gastroenterology and Hepatology* 3:215-222, 1988.
35. Ferrari C, Fiacchadori F, and Chisarri FV. Molecular biology and pathogenesis of hepatitis B. *Italian J Gastroenterol* 19:224-230, 1987.
36. Gebreselassie L. The distribution of the subtypes of HBsAg in Ethiopia. *International Journal of Epidemiology* 15(3):392-394, 1986.
37. Gerber MA and Thung SN. Viral hepatitis:pathology. In Haubrich WS, Kalser MH, Roth JLA, and Schaffner F (Eds). *Bockus Gastroenterology Volume 5*. IVth Edn, WB Saunders Company, Philadelphia, 1985. pp.2825-2855.
38. Gerety RJ, and Tabor, E.. Newly licensed hepatitis B vaccine known safety and unknown risks (editorial). *J.Am Med A.* 249(6):745-746, 1983.
39. Gerin JL, Holland PV, and Purcell RH. Australia antigen: large-scale purification from human serum and biochemical studies of its protein. *J Virol* 7:569-576, 1971.
40. Gerken G, Manns M, Gerlich WH, Hess G, and Meyer zum Buschenfelde KH. Pre-S encoded surface protein in relation to the major viral surface antigen in acute hepatitis B virus infection. *Gastroenterology* 92(6):1864-1868, 1987a.

41. Gerety RJ, Hoofnagle JH, Nortman DF, and Barker LF. Hepatitis B surface antigen (HBsAg) subtypes and indices of clinical disease. *Gastroenterology* 68:1253-1260, 1975.
42. Gerlich WH, Heermann KH, Kruse F, Marquardt O, and Seifer M. Immunogenicity of gene S and pre-S domains in hepatitis virions and in recombinant hepatitis B surface antigen filament. In Zuckerman (Ed). *Viral hepatitis and liver disease*. Alan R. Liss, Inc., 1988. pp.1091-1093.
43. Griffit OM. Techniques of preparative, zonal, and continuous flow ultracentrifugation. Beckman Instrument Inc., 1983.
44. Gunawan S, Mulyanto, David HM, D. Sumarsidi, Sulastini, Herry Purbayu, Karyono W, dan Soewignjo. Infeksi VHB hiperendemik dengan subtipe langka di Lombok Utara. Pertemuan Ilmiah III PPPI, Palembang, 1985.
45. Hadziyannis S, Raimando G, Papaioannou C, Anastassakos C, Wong D, Sinsky J, and Shafritz D. Expression of pre-S gene-encoded protein in liver and serum during chronic hepatitis B virus infection in comparison to other markers of active virus replication. Other Journal 5(3):253-9, 1987.
46. Hadziyannis S, Bramou T, Makris A, Moussoulis G, Zignego L, and Papaioannou C. Interferon alfa-2b treatment of HBeAg negative/serum HBV DNA positive chronic active hepatitis type B. *J Hepatology* 11:S133-S136, 1990.

47. Hartono, Soewignjo, Mulyanto, S Gunawan dan Nurayandari. Infeksi hepatitis B di Bajawa, Flores. Pertemuan Ilmiah V PPHI, Jkarta, 1990.
48. Heermann KH, Goldmann U, Schwartz W, Seyffarth T, Baumgerten H, and Gerlich WH. Large surface protein of hepatitis B virus containing the Pre-S sequence. *J Virol* 52(2) :396-402, 1984.
49. Heerman KH, Kruse F, Seifer M, Gerlich WH. Immunogenicity of the gene S and pre-S domains in hepatitis B virions and HBsAg filaments. *Intervirology* 28:14-25, 1987.
50. Helstrom UB and Sylvan SPE. The immune respon against pre-S2-encoded peptides and human serum albumin during hepatitis B virus infection. *Postgraduate Medical Journal* 63(Suppl.2):165-168, 1987.
51. Hess G, Gerken G, Gerlich W, and Meyer zum Buschenfelde KH. Expression of hepatitis B virus markers in asymptomatic HBsAg carriers with special emphasis to pre-S expression. *Other Journal* 3(S1):S130, 1986.
52. Hess G, Gerken G, Weber C, Knolle J, Dormeyer HH, Arnold W, Manns M, and Meyer zum Buschen felde KH. Detection of hepatitis B virus marker in sera of asymptomatic hepatitis B surface antigen carriers with special emphasis to pre-S-encoded proteins. *Digestion* 38(2):90-5, 1987.
53. Hess G, Gerken G, Weber C, Manns M and Meyer zum Buschenfelde KH. Reactivation of chronic type B hepatitis:the the effect on expression of serum HBV-DNA and pre-S encoded protein. *J Med Virol* 25(2):197-204, 1988.

54. Hino O, Otake K, and Rogler CE. Feature of two hepatitis B virus DNA integrations suggest mechanisms of HBV integration. *J Virol* 29(6):403-415, 1989.
55. Hirata AA and Brandriss MW. Passive hemagglutination procedures for protein and polysaccharide antigen using erythrocytes stabilized by aldehydes. *J Immunol* 100:641-646, 1968.
56. Holland PV, Purcell RH, Smith H, and Alter HJ. Subtyping of hepatitis associated antigen (HBsAg); simplified technique with counterelectrophoresis. *J Immunol* 109(3):420-425, 1972.
57. Holland PV. Hepatitis B surface antigen and antibody (HBsAg/Anti-HBs). In Gerety RJ. (Ed). *Hepatitis B*. Academic Press Inc., New York, 1985. pp.5-25.
58. Hoofnagle JH. Type B hepatitis: virology, serology and clinical course. *Seminar in Liver Dis* 1(1):1-14, 1981.
59. Hoofnagle JH, Gerety RJ, Smallwood LA, and Barker LF. Subtyping of hepatitis B virus antigen and antibody by radioimmunoassay. *Gastroenterology* 72:290-296, 1977.
60. Howard CR, Stirk HJ, Brown SE, and Steward MW. Toward the development of synthetic hepatitis B vaccines. In Zuckerman (Ed). *Viral hepatitis and liver disease*. Alan R. Liss, Inc., 1988. pp.1094-1101.
61. Hu PS, Carithers Jr RL, Firenza V, and Darrell L. Quantitative studies of the hepatitis B viral pre-S proteins:lack of correlation with HBsAg status. *J Virol Methods* 16:97-114, 1987.

62. Hu KQ, Yu ZQ, Li FH, and Hao LJ. Expression and clinical significance of pre-S1 and pre-S2 proteins of HBV sera of patients with chronic liver disease. *Liver* 9:146-152, 1989.
63. Ibarra MZ, Mora I, Bartolome J, Banda FL, Porres JC, Hernandez-Guio C, Carreno V. Pre-S1 and pre-S2 antigens among HBsAg carrier:relation with viral replication and reactivation in anti-HBe patients (abstr). *Other Journal* 5(S1):S146, 1987.
64. Ibarra MZ, Mora I, Bartolome J, Porres JC, and Carreno V. Detection of proteins encoded by the pre-S region of hepatitis B virus in the sera of HBsAg carriers:relation to viral replication. *Liver* 9:153-158, 1989.
65. Iizuka H. HBsAg precipitation by PEG. Unpublish data.
66. Itoh Y, Takai E, Ohnuma H, Kitajima, Tsuda F, Machida A, Mishiro S, Nakamura T, Miyakawa, and Mayumi M. A synthetic peptide vaccine involving the product of the pre-S2 region of hepatitis B virus DNA:protective efficacy in chimpanzees. *Proc Natl Acad Sci* 83:9174-9178, 1986.
67. Jawetz E, Melnick JL and Aldelberg EA. Review of medical microbiology. 12th edn, Lange Medical Publication Maruzen Co., Ltd., 1976. pp.381-391.
68. Jilg W, Gelhoune C, Deinhardt F, Roumeliotou-Karayannis AJ, Papaevangelou GJ, Mushahwar IK, and Overby LR. Hepatitis B surface antigen (HBsAg) subtype-specific antibodies in persons vaccinated against hepatitis B. *J Med Virol* 13:171-178, 1984.
69. Julius. Sutipe HBsAg di Sumatera Barat. Pertemuan Ilmiah V PPPI, Jakarta, 1990.

70. Klingenstein RJ and Dienstag JL. Immunopathogenesis of acute and chronic hepatitis B. In Gerety RJ (Ed). Hepatitis B. Academic Press, New York, 1985. pp.221-241.
71. Klinkert MQ, Theilmann L, Pfaff E and Schaller H. Pre-S1 antigens and antibodies early in the course of acute hepatitis B virus infection. J Virol 58(2):522-525, 1986.
72. Kurai K, Iino S, Koike K, Mitamura K, Endo Y, and Oka H. Pre-S2 antigen in chronic HBV infection: anew marker for HBV replication (Abstr). J Med Virol 21(4):A58-9, 1987.
73. Kurai K, Iino S, Koike K, Mitamura K, Endo Y and Oka H. Serum titers of pre-S2 antigen in patient with acute and chronic type B hepatitis:relation to serum amino transferase activity and other hepatitis B virus markers. Hepatology 9(2):175-179, 1989.
74. Kurai K, Iino S, Koike K, Mitamura K, Endo Y, and Oka H. Pre-S(2) antigen in chronic hepatitis B virus infection: A new marker for HBV replication. In Zuckerman (Ed). Viral hepatitis and liver disease. Alan R. Liss, Inc., 1988. pp.284-286.
75. Kusumobroto HO. Pengelolaan perdarahan masif varises esofagus pada sirosis hati (Disertasi). Airlangga University Press, Surabaya, 1983.
76. Le Bouvier GL. The heterogeneity of Australia antigen. J Infect Dis 123(6):671-675, 1971.
77. Le Bouvier GL, McCollum RW, Hierholzer WJ, Irwin GR, Krugman S, and Giles JP. Subtypes of Australia antigen and hepatitis B virus. JAMA 222(8):928-930, 1972.

78. Levrero M, Jean-Jean O, Franco A, Balsano F, Will H, and Perricaudet M. Hepatitis B virus X gene expression in human cells and anti-X antibody detection in chronic hepatitis B virus infection. In Zuckerman AJ (Ed). *Viral Hepatitis and Liver Disease*. Alan R. Liss, Inc., New York, 1988. pp.330-333.
79. Lofgren B and Nordenfelt E. Evaluation of new radioimmunoassay for detecting hepatitis B e antigen and its antibody. *J Med Virol* 5:323-330, 1980.
80. Lutz W. Statistical methods as applied to Immunological Data. In Weir DM (Ed). *Handbook of experimental Immunology Vol 3*. 3rd edn Blackwell Scientific Publication, Oxford, 1978. pp.A2.17-A2.20.
81. Machida A, Kishimoto S, Ohnuma H, Baba K, Oda K, Nakamura S, Miyakawa Y, and Mayumi M. A hepatitis B surface antigen polypeptide (P31) with the receptor for polymerized human serum as well as chimpanzee albumins. *Gastroenterology* 85:268-274, 1983.
82. Machida A, Kishimoto S, Ohnuma H, Baba K, Ito Y, Miyamoto H, Funatsu G, Oda K, Usuda S, Togami S, Nakamura T, Miyakawa Y, and Mayumi M. A polypeptide containing 55 amino acid residues coded by the pre-S region of hepatitis B virus deoxyribonucleic acid bears the receptor for polymerized human as well as chimpanzee albumins. *Gastroenterology* 86:910-918, 1984.

83. Machida A, Ohnuma H, Takai E, Tanaka T, Itoh Y, Tsuda F, Akahane Y, Usuda S, Nakamura T, Miyakawa Y and Mayumi M. A synthetic peptide coded for by the pre-S2 region of hepatitis B virus for adding immunogenicity to small spherical particles made of the product of the S gene. Mol Immunol 24(5):523-9, 1987.
84. Magnius LO, and Espmark A. A new antigen complex co-occurring with Australia antigen. Acta Pathologica et Microbiologica Scandinavia 80(Section B):335-337, 1972.
85. Maguire HT, Hoefller JP, Siddiqui A. HBV and protein alters the DNA binding specificity of CREB and ATT-2 by protein-protein interaction. Science 252:824-842, 1991.
86. Maupas P, Barin F, Chiron JP, Coursaget P, Goudeau A, Perrin J, Denis F, and Diop Mar I. Efficacy of hepatitis B vaccine in prevention of early HBsAg carrier state in children:control trial in an endemic area (Senegal). Lancet i:289-292, 1981.
87. Mayumi M. Novel Hepatitis B Vaccines Involving the Translation Product of the pre-S2 region of Hepatitis B Virus DNA. Simposium Hepato-Gastroenterologi Nasional, Mataram, 1986.
88. Mayumi M. Recent advances in the molecular biology of hepatitis B virus:HBV mutants with precore region defects and immunopathological response of the host against them. VIIth Biennial Scientific Meeting of APASL, Jakarta, 1990.
89. Mazzur S, Burgert S, and Blumberg BS. Geographical distribution of Australia antigen determinants d/y and w. Nature 247:38-40, 1974.

90. Metselaar D, and Simpson DIH. Practical virology for medical student and practitioners in tropical countries. Oxford University Press, New York, 1982.
91. Millich DR, Leroux-Roels G, and Chisari FV. Genetic regulation of the immune response to hepatitis B surface antigen (HBsAg). II. Qualitative characteristics of the humoral immune response to the a, d, and y determinant of HBsAg. *J Immunol* 130(3):1395-1400, 1983.
92. Millich DR, Thornton GB, Neurath AR, Kent SB, Michell ML, Tiollais P, Chisari FV. Enhanced immunogenicity of the pre-S region of hepatitis B surface antigen. *Science* 228 :1195-1199, 1985a.
93. Millich DR, McNamara M K, McLachlan A, Thornton GB, and Chisari FV. Distinct H-2-linked regulation T-cell responses to pre-S and S regions of the same hepatitis B surface antigen polypeptide allows circumvention of non responsiveness to the S region. *Proc Natl Acad Sci USA* 82:8168-8172, 1985b.
94. Millich DR, McLachlan A, Chisari FV, Nakamura T, and Thornton GB. Two distinct but nonoverlapping antibody binding sites in the pre-S2 region of HBsAg localized within 11 continuous residues. *J Immunol* 137(8):2703-2710, 1986.
95. Millman I, Loeb LA, Bayer ME, and Blumberg BS. Australia antigen (a hepatitis-associated antigen) purification and physical properties. *J Exp Med* 131:1190-1199, 1970.

96. Mishiro S, Imai M, Takahashi K, Machida A, Gotanda T, Miyakawa Y and Mayumi M. A 49,000 dalton polypeptide bearing all antigenic determinants and full immunogenicity of 22-nm hepatitis B surface antigen particles. *J Immunol* 124:1589-1593, 1980.
97. Miyakawa Y and Mayumi M. Hepatitis e antigen and antibody. In Gerety RJ (Ed). *Hepatitis B*. Academic Press Inc., New York, 1985.
98. Moriarty AM, Mitamura K, and Thornntton GB. Detection of antibody to hepatitis viral X determinant in chronic hepatitis B viral infection. In Zuckerman AJ (Ed). *Viral Hepatitis and Liver Disease*. Alan R. Liss, Inc., New York, 1988. pp.345-350.
99. Mulyanto, Soewignjo, Suharjono P, A Widjaya dan L Basuki. Hepatitis B antigen pada penderita penyakit hati di Bagian Penyakit Dalam RSU Mataram. KOPAPDI IV, Medan, 1978.
100. Mulyanto, Soewignjo S, A Widjaya, D sumarsidi, Indradjid, Nakamura T dan Mayumi M. Prevalensi petanda serologik infeksi VHB pada murid-murid STK-SLTA di Sumbawa Besar. Pertemuan Ilmiah II PPPI, Jakarta, 1983.
101. Mulyanto, Soewignjo S, Sulastini, P Hasan, D Sumarsidi dan Makoto Mayumi. Petanda serologik VHB pada penderita penyakit hati di Unit Penyakit Dalam RSU Mataram. KOPAPDI VI, Jakarta, 1984.
102. Mulyanto. Purification of Hepatitis B Surface Antigen By Zonal Ultracentrifugation, a training Report. Immunology Division, Jichi Medical School, Japan, 1984.

103. Mulyanto, S Gunawan, Soewignjo S, Alfian S dan Lukman Ichsan. Beberapa aspek pemurnian partikel VHB dari sera HBsAg-positif. Pertemuan Ilmiah III PPHI, Palembang, 1985a.
104. Mulyanto. "Exposure Rate" terhadap infeksi Virus Hepatitis B pada penduduk P.Air (Selat Lombok). Pertemuan Ilmiah III Perhimpunan Peneliti Hati Indonesia, Palembang, 1985b.
105. Mulyanto. Subtipe HBsAg dalam hubungannya dengan golongan darah ABO dari darah donor di DTD PMI Surabaya. Pertemuan Ilmiah IV PPHI, Surabaya, 1987.
106. Mulyanto. Protein pre-S2 dan subtipe HBsAg pada darah donor dengan HBsAg positif titer tinggi. Komunikasi Ilmiah antar Cabang, dalam rangka Konker PPHI, PEGI & PGI, Manado, 1989.
107. Mulyanto, Soewignjo S and FX Budhianto Suhadi. The role of subtype of hepatitis B surface antigen (HBsAg) in the infectivity of HBsAg-positive sera. VIIth Biennial Scientific Meeting APASL, Jakarta, 1990.
108. Mulyanto, B Sanjaya, Hartono, Soewignjo S, D Sumarsidi, S Gunawan, and SDA Soesbandoro. HBsAg subtype in some areas of the eastern part of Indonesia. VIIth Biennial Scientific Meeting APASL, Jakarta, 1990.
109. Mulyanto, S Gunawan, Soewignjo S dan D Sumarsidi. Prevalensi HBsAg dan subtipe HBsAg di NTT. Laporan Penelitian, 1991.

110. Nath N, Fang GT, Ledman R, Massur S, Dodd RY. Relationship of subtype of hepatitis B surface antigen with e antigen and its corresponding antibody. *J Infect Dis* 138:252-255, 1978.
111. Neurath AR, Kent SBH, Strick N. Location and chemical synthesis of a pre-S gene coded immunodominant epitope of hepatitis B Virus. *Science* 224:392-395, 1984.
112. Neurath AR, Kent SBH, Strick N, Taylor P, and Stevens CE. Hepatitis B virus contains pre-S gene-encoded domains. *Nature* 315:154-156, 1985.
113. Neurath, A.R., Adomawicz, P., Kent, S.B.H., Riottot, MM, Strick, N., Parker, K., Offensperger, W., Petit MA, Petit, M.A., Wahl, S., Budkowska, A., Girard, M. and Pillot, J.. Characterization of monoclonal antibodies specific for the pre-S2 region of the hepatitis B virus envelope protein. *Mol Immunol* 23(9):991-7, 1986.
114. Neurath AR, Kent SBH, Strick N, and Parker K. Biological role of pre-S sequences of the hepatitis B virus envelope protein: implication for vaccine design. *IVth Asian symposium on strategy for large scale hepatitis B immunization, Hongkong*, 1986.
115. Neurath AR, Kent SBH, Strick N, Parker K, Courcouse AM, Riottot MM, Petit MA, Budkowska, A, Girard M, and Pillot J. Antibodies to synthetic peptides from the pre-S1 and pre-S2 regions of one sup-type of the hepatitis B virus (HBV) envelope protein recognize all HEV subtypes. *Mol Immunol* 24(9):975-80, 1987.

116. Neurath AR, Cosio L, Price AM, and Lippin A. Purification of hepatitis B antigen associated particles, use of reorienting gradient rotor. Proc Soc exp Bio Med. 144:384-390, 1973.
117. Nishioka K. Predominant mode of transmission of hepatitis B virus perinatal transmission in Asia. In Vyas GN, Dienstag JL, & Hofnagle JH (Eds). Viral Hepatitis B and Liver Disease: 1984 International Symposium. San Francisco, Grune & Stratton Inc., 1984, pp.423-432.
118. Nishioka K. Hepatitis B virus and hepatocellulare carcinoma; postulates for an ethiological relationship. In Klein G (Ed). Advances in viral oncology, Vol 5. New York, Raven Press, 1985. pp.173-199.
119. Nowotny A. Basic Exercises in Immunochemistry a Laboratory Manual. 2nd, Springer-Verlag, New York, 1979. pp.211-212.
120. Okamoto H, Imai M, Usuda S, Tanaka E, Tachibana K, Mishiro S, Machida A, Nakamura T, Miyakawa W, and Mayumi M. Hemagglutination assay of polypeptide coded by the pre-S region of hepatitis B virus DNA with monoclonal antibody:correlation of pre-S polypeptide with the receptor for polymerized human serum albumin in serum containing hepatitis B antigen. J immunol 134(2):1212-1216, 1985.
121. Okamoto H, Imai M, Tsuda F, Tanaka T, Miyakawa Y, and Mayumi M. Point mutation in the S gene of hepatitis B virus for a d/y or w/r subtype change in two blood donors carrying a surface antigen of compound subtype adyr or adwr. J Virol 61(10):3030-3034, 1987.

122. Okamoto H, Tsuda F, Sakugawa H, Retno-Sastrosoewignjo, Imai M, Miyakawa Y, and Mayumi M. Typing hepatitis B virus by homology in nucleotide sequence:comparison of surface antigen subtype. *J Gen Virol* 69:2575-2583, 1988.
123. Okamoto H, Omi S, Wang Y, Itoh Y, Tsuda F, Tanaka T, Akahane Y, Miyakawa Y, and Mayumi M. The loss of subtypic determinants in alleles, d/y or w/r, on hepatitis B surface antigen. *Molecular Immunology* 26(2):197-205, 1989.
124. Ou JH and Rutter WJ. Regulation of secretion of the hepatitis B virus major surface antigen by the pre-S1 protein. *J Virol* 61(3):782-786, 1987.
125. Patzer EJ, Simonsen CC, Nakamura GR, Hershberg RD, Gregory TJ, and Levinson AD. Characterization of recombinant-derived hepatitis B surface antigen secreted by continuous cell line. In. Vyas GN, Dienstag JL, and Hoofnagle JH (Eds). *Viral Hepatitis and Liver Disease*. Grune & Stratton, Inc., New York, 1984. pp.477-485.
126. Peterson DL, Paul DA Lam J, Tribby IIE, and Achord DT. Antigenic structur of hepatitis B surface antigen:identification of the "d" subtype determinant by chemical modification and use of monoclonal antibodies. *J Immunol* 132(2):920-927, 1984.
127. Petit MA, Dubanchet S, Capel F, Voet P, Dauguet C, and Hauser P. HepG2 cell binding activities of different hepatitis B virus isolates: inhibitory effect of anti-HBs and anti-pre-S1(21-47) (absct). *Virology* 180(2):483-491, 1991.

128. Petre J and Peetermans J. Yeast derived hepatitis B vaccine. International Scientific Seminar:Recent advanced in the development of vaccine. Bio Farma, Bandung, 1990.
129. Polson A, Potgieter GM, Largier JF, Mears GEF, and Joubert FJ. The fractionation of protein mixtures by linear polymers of high molecular weight. *Biochim Biophys Acta* 82:463-475, 1964.
130. Pontisso P, Alberti A, Bortolotti F, and Realdi G. Polymerized human serum albumin in acute and in chronic hepatitis B virus infection. *Gastroenterology* 84(2):220-226, 1983.
131. Pontisso P, Bankowski M, and Peeples M. Evidence for hepatitis B virus middle S protein binding to human liver membranes (Abst). *Other Journal* S11D:15, 1987.
132. Prince AM, Vnek J, and Brotman B. An affordable multide-terminant plasma derived hepatitis B virus vaccine. In Williams AO, O'Conor GT De-The GB, and Johnson CA (Eds). *Virus asseciated cancers*, 1984. pp.355-372.
133. Purcell RH. Hepatitis B: a scientific succes story (Almost). In *Infection, Immunity, and blood Transfision*. Alan R. Liss, Inc. 1985, pp.11-43.
134. Rioche M. Subtype of HBsAg in Morocco: general distribution in HBsAg carriers in Casablanca in term of their clinical state, relation withnwith the markers of the HBe system (absct). *Bull Soc Pathol Exot Filiales* 79(2):191-198, 1986.

135. Robinson WS. The molecular biology of hepatitis B virus and related Viruses of animals. In Gerety (ed). Hepatitis B. Academic Press, Inc., New York, 1985. pp.319-347.
136. Roitt IM. Essential immunology. 6th edn, Blacwell Scientific Publication, Hongkong, 1988. pp.67-68.
137. Rutgers T, Cabezon T, Harford N, Vanderbrugge D, Descurieux M, Opstal OV, Wijnendaele FV, Hauser P, Voet P, and DeWilde M. Expression of different form of hepatitis B virus envelope protein in yeast. In Zuckerman AJ (Ed). Viral Hepatitis and Liver Disease. Alan R. Liss, Inc., New York, 1988. pp.304-308.
138. Rutter WJ, Ziemer M, Ou J, Shaul Y, Laub O, Garcia P. and Standring DN. Transcription unit of hepatitis B virus genes and structure and expression of integrated viral sequences. In In Vyas GN, Dienstag JL, and Hoofnagle JH (Eds). Viral hepatitis and liver diseases. Grune & Stratton Inc., New York, 1984. pp.67-86.
139. Sanjaya B, Mulyanto, D Sumarsidi, S Gunawan, Sulaiman Ama Ngongu D dan Soewignjo. Infeksi virus hepatitis A dan B pada murid-murid TK dan SD di Jayapura, Irian Jaya. Pertemuan lmiah V PPPI, Jkarta, 1990.
140. Seto E, Mitchell FJ, and Yen TSB. Transactivation by the hepatitis B virus X protein depend on AP-2 and others transactivation factors. Nature 334:72-74, 1990.
141. Sherlock S. The natural history of hepatitis B. Post-graduate Medical Journal 63(2):7-11, 1987.
142. Sherlock S and Thomas HC. Hepatitis B virus infection:the impact of molecular biology. Hepatology 3:455-456, 1983.

143. Shorey J. A new hepatitis B surface antigen. *J Infect Dis* 133(1):1-6, 1976.
144. SmithKline Biologicals. Prospek baru mengendalikan hepatitis B. SmithKline Beecham, 1989.p.15.
145. Snedecor GW. Statistical Methods. 5th Edition, Iowa State University Press, Ames Iowa, 1964.pp.251-300.
146. Soewignjo S, Mulyanto, D Sumarsidi, A Widjaya, L Primiharto, Santoso R, dan Mayumi M. Penelitian ekologik infeksi virus hepatitis B di Pulau Air (selat Lombok), laporan I. Naskah Lengkap Pertemuan Ilmiah PPPI II, Jakarta, 1983.pp. 427-468.
147. Soewignjo, S dan Mulyanto. Epidemiologi infeksi Virus Hepatitis B di Indonesia. *Acta Medica Indonesiana* 15:215-230, 1984.
148. Soewignjo S, Mulyanto, D Sumarsidi, Sulastini, P Hasan, L Primiharto, Karyono W dan Mayumi M. Penelitian ekologik infeksi VHB di Pulau Air (Selat Lombok), laporan II. Naskah lengkap KOPAPDI VI, Jakarta, 1984.pp.1372-1380.
149. Soewignjo S, Padmodiwryo S, A Widjaya, Mulyanto, Prawira RK, Dohoriah. Antigen dan antibodi hepatitis B (HBsAg dan anti-HBs) pada pelajar dan mahasiswa di Mataram. Naskah Lengkap KOPAPDI V, Semarang, 1981. pp.382-397.
150. Steel RGD and Torie JH. Principles and procedures of statistic, a biometrical approach. 2nd edn, McGraw-Hill International Book Company, London, 1984.pp.231-232.
151. Stevens C, Alter H, Taylor P, Zeng E, Harley E, Szmuness W et al. Hepatitis B vaccine receiving hemodialysis:immunogenicity and efficacy. *N Eng J Med Aug* 23:496-501, 1984.
152. Sulaiman A, Nurul Akbar, Noer HMS and Roestam M. Subtype of HBsAg in blood donor in Indonesia. IInd ICMR Seminar on Viral Hepatitis and Related Diseases, Kobe, 1981.

153. Summers J and Mason WS. Replication of the genome of hepatitis B like virus by reverse transcription of an RNA intermediate. *Cell* 29(6):403-415, 1982.
154. Summers J. Replication of hepatitis B viruses. In Vyas GN, Dienstag JL, and Hoofnagle JH (Eds). *Viral hepatitis and liver diseases*. Grune & Stratton Inc., New York, 1984. pp.87-96.
155. Summers J. The replication cycle of hepatitis B viruses. *Cancer* 61:1957-1962, 1988.
156. Szmuness W, Stevens CE, Harley EJ, Zang EA, Oleszko WR, William DC, Sadovsky R, Morrison JM, and Kellner A. Hepatitis B vaccine: demonstration of efficacy in a controlled clinical trial in a high-risk population in the United States. *N Eng J Med* 303:833-841, 1980.
157. Szmuness W, Neurath AR, Stevens CE, Strick N, and Harley EJ. Time trends of the prevalences of hepatitis B e antigen positives among hepatitis B carriers in Japan. *International Journal of Epidemiology* 16(4):579-83, 1981.
158. Tabor E, Gerety RJ, Cairns J, and Bayley AN. Antibody responses of adults, adolescents, and children to a plasma-derived hepatitis B vaccine in a rural African setting. *J Med Virol* 32:134-138, 1990.
159. Tachibana CF, Baba K, Zukuda M, Imai M, Miyakawa Y, and Mayumi M. High prevalence of e antigen among healthy blood donors carrying hepatitis B surface antigen in Japan. *Vox Sang* 32:296-2999, 1977.
160. Tachibana K, Tanaka T, Usuda S, Okamoto H, Tsuda F, Akahane Y, Miyakawa Y, and Mayumi M. Hepatitis B surface antigen with an excess or deficiency in subtype determinant in sera from asymptomatic carriers in Japan. *Viral Immunology* 2(1):25-29, 1989.

161. Takahashi K, Kishimoto S, Ohnuma H, Machida A, Takai E, Tsuda F, Miyamoto H, Tanaka T, Matsushita K, Oda K, Miyakawa Y, and Mayumi M. Polypeptides coded for by the region pre-S and gene S of HBV DNA with the receptor for polymerized human serum albumin: expression on hepatitis B particles produced in the HBeAg or anti-HBe phase of hepatitis B virus infection. *J Immunol* 136(9):3467-72, 1986.
162. Theilmann L, Klinkert MQ, Gmelin K, Salfeld J, Schaller H, and Pfaff E. Detection of pre-S1 proteins in serum and liver of HBsAg-positive patient: a new marker for hepatitis B virus infection. *Hepatology* 6(2):186-190, 1986.
163. Thomas HC, Pignatelli M, Goodall A, Waters J, Karayiannis P, and Brown D. Immunologic mechanism of cell lysis in hepatitis B virus infection. In Vyas GN, Dienstag JL and Hoofnagle JH (Eds). *Viral hepatitis and liver disease*. Grune & Stratton, Inc., New York, 1984. pp.167-177.
164. Thomas HC. The hepatitis B virus and host response. *J Hepatology* 11:S83-S89, 1990.
165. Thung SN, and Gerber MA. Polyalbumin Receptors: their role in the attachment of hepatitis B virus to Hepatocytes. *Seminar in Liver Disease* 4(1):69-75, 1984.
166. Tiollais P, Dejean A, Brechot C, Michel, ML, Soningo P, Wain-Hobson S. Structure of Hepatitis B Virus DNA. In Vyas GN, Dienstag JL, and Hoofnagle, JH (Eds). *Viral Hepatitis and Liver Disease. International Symposium*. San Francisco, Grune and Stratton Inc., 1984. pp.49-65.

167. Tiollais P, Purcell C, and Dejean A. The hepatitis B virus. *Nature* 317:489-495, 1985.
168. Tiollais P, Buendia MA, Brechot C, Dejean A, Michel ML, and Pourcel C. Structure, genetic organization, and transcription of Hepadana viruses. In Zuckerman AJ (Ed). *Viral Hepatitis and Liver Disease*. Alan R. Liss, Inc., New York, 1988. pp.295-300.
169. Tsukuma H, Oshima A, Hiyama T, Fujimoto I, Yamano H, and Tanaka M. Time trends of the prevalences of the hepatitis B e antigen positives among hepatitis B virus carriers in Japan. *International Journal of Epidemiology* 16(4):579-583, 1987.
170. Villarejos VM, Anderson-Visona K, Jaime-Serra et al. Anti-DNA, anti-HBc correlation with RIA detected HBeAg and anti-HBe in chronic HBsAg carriers. *J Med Virol* 5:265-271, 1980.
171. Vnek J, and Prince AM. Large scale purification of hepatitis B surface antigen. *J Clin Microbiol* 3(6): 626-661, 1976.
172. Vranckx R, Cole J, and Peetermans M. Correlation between concentration of HBeAg and the presence of HBeAg, ant-HBe and anti-HBc in chronic asymptomatic carriers od HBsAg. *Infection* 8:(6):279-282, 1980.
173. Vyas GN, and Blum HE. Hepatitis B Virus Infection. *West J Med* 140:757-762, 1984.
174. Vyas GN, and Shulman NR. Hemagglutination assay for antigen and antibody in viral hepatitis. *Science* 170:332-333, 1970.

175. Vyas GN, Williams EW, Klaus GGB, and Bond HE. Hepatitis-associated antigen. Protein, peptides and amino acid composition of purified antigen with its use in determining sensitivity of the hemagglutination test. *J Immunol* 108: 1114-1118, 1972.
176. Watson JD; Hopkins NH; Roberts JW; Steitz JA; Weiner AM. Molecular Biology of the Gene. 4th Edn, The Benyamin/Cumming Publishing Company, Inc., Menlo Park, California, 1987. pp.832-853;936-945.
177. WHO Expert Committee on Viral Hepatitis. Advances in viral hepatitis. Technical Report Series 602, 1977.
178. WHO. Progress in the control of viral hepatitis:Memorandum from a WHO meeting. *Bulletin* 66(4):443-455, 1988.
179. Wollersheim M and Hofschneider PH. Transactivation by a product of the X gene of hepatitis B virus. In Zuckerman AJ (Ed). *Viral Hepatitis and Liver Disease*. Alan R. Liss, Inc., New York, 1988. pp.334-340.
180. Wong DT, Nath N, and Sninsky JJ. Identification of hepatitis B virus polypeptides encoded by entire pre-S open reading Frame. *J. Virol* 55(1):223-231, 1985.
181. Wu T, Condreay LD, Liu C, Mason W, and Jilbert AR. Hepadnavirus DNA synthesis. In Hollinger FB, Lemon SM and Margolis H (Eds). *Viral Hepatitis and Liver Disease*. Williams & Wilkins, Baltimore, 1991. pp.114-121.
182. Yamashita Y, Kurashina S, Miyakawa Y, and Mayumi M. South to north gradient in distribution of the hepatitis B surface antigen in Japan. *J Infect Dis* 131:567-569, 1975.
183. Zuckerman AJ and Harrison TJ. Hepatitis B virus chronic liver disease and hepatocellular carcinoma. *Post Graduate Medical Journal* 63(Sppl.2):13-19. 1987.