

REFERENCES

- Akarca US., Greene S and Lok ASF (1994):** Detection of pre-core HBV mutants in asymptomatic HBsAg-positive family members. *Hepatology*. 19:1366-1370.
- Akarca US. and Lok ASF. (1995):** Naturally occurring HBV core gene mutations *Hepatology*; 22:50-60.
- Alter HJ., Seeff LB and Kaplan PM. (1976):** Type B hepatitis: the infectivity of blood positive for 'e' antigen and DNA-polymerase after accidental needlestick exposure. *In. Engl. J. Med.*, 295:909-913.
- Asubel AM., Brent R., Kingston RE., Moore DD., Smith J.A., Seidman JG., and Struhl K. (1987):** (eds.), *Current Protocols in Molecular Biology*. Greene publishing Associates and Wiley-Interscience, New York.
- Barker BL., Bisceglie AM., Kaneko S, and Miller R. (1991):** Determination of HBV-DNA in serum using the PCR : Clinical significance and correlation with serological and biochemical markers. *Hepatology*. 13:632-636.
- Barker LF. (1973):** Antibody responses in viral hepatitis B. *J. Am. Med. Ass.*, 223: 1005.
- Bassily S., Farid Z., and Higashi G. (1979):** Chronic hepatitis B antigenaemia in patients with hepatosplenic schistosomiasis. *J. Trop. Med. Hyg.* 82:248:251.
- Bavand M., Feitelson M. and Laub O. (1989):** The HBV -associated reverse transcriptase is encoded by the viral Pol gene. *J. Virol.* 63:1019-1021.

- Benjellon S., Tong S., Li J. and Benslimane A. (1993):** Pre-core mutation associated with lack of hepatitis Be antigenaemia in Moroccan asymptomatic carriers of the virus. *Res. Virol.* 144(2): 159-67.
- Bergmeyer HU., Scheibe P. and Wahlefeld AW. (1978) :** Optimization of methods for aspartate aminotransferase and alanine aminotransferase, *Clin. Chem* , 24/1:58-73.
- Berquist KR., Maynard JE. and Murphy BL. (1976):** Infectivity of serum containing HBsAg and anti-HBe. *Lancet*, 1:1026-1027.
- Bevilaqua F., Conti A. and Marcello A. (1991):** Screening of HBV-DNA in chronic HBsAg carriers. *Microbiologica*; 14(4):279-86.
- Blum HE., Offensperger WF. and Walter E. (1988):** Latent HBV infection with full length viral genome in a patient serologically immune to HBV infection. *Liver*, 8: 307-316.
- Blumberg BS., Alter HJ. and Visnich S. (1965):** A "new" antigen in leukemia sera. *J. Am. Med. Assoc.* 191:541.
- Bonino F., Hoyer B., and Nelson J.(1981):** HBV-DNA in the sera of HBsAg carriers: a marker of active HBV replication in the liver. *Hepatology* 1:286-391.
- Bonino F., Rosina F., and Rizzetto M. (1986):** Chronic hepatitis in HBsAg carriers with serum HBV-DNA and anti-HBe. *Gastroenterology* 90:1268-1273.
- Boniolo A., Davis M. and Matte JA. (1982):** The use of an ELISA technique for screening of hybridoma antibodies against HBsAg. *J. Immunol. Methods*. 49:1.

- Bortoloti F., Cadrobbi P., and Crivellaro C. (1990):** Long-term outcome of chronic type B hepatitis in patients who acquire HBV infection in childhood. *Gastroent.* 99:805-810.
- Botha JF., Ritchie MJ., and Dusheiko G., (1984):** HBV carrier state in black children In Ovamboland: role of perinatal and horizontal infection. *Lancet* (i):1210.
- Bourdi M., Larrey D., Nataf J., Bernuau J., and Guengerich FP. (1990):** Anti-liver endoplasmic reticulum autoantibodies are directed against human cytochrome P. *J.Clin. Invest* 85: 1967-1973.
- Bowers GN., and Mc Comb RB (1966):** A continuous spectrophotometric method for measuring the activity of serum alkaline phosphatase, *Clin. Chem.* 12:70.
- Boyer JL. and Klatskin G. (1970) :** Pattern of necrosis in acute viral hepatitis: prognostic value of bridging (subacute hepatic necrosis). *N. Engl. J. Med* ;283:1063-1071.
- Boyer TD. and Strauss RM. (1994):** Diseases of the liver. In : *Differential diagnosis.* Baronders JA and Carpenter CCJ, eds. Lea & Febiger, USA, 10:392.
- Braham J., Hurtado C., Latorre R. and Velasco M. (1992):** Significance of investigating HBV-DNA in serum from patients with hepatitis B. *Rev. Med.- Child.* 120 (9):1003-5.
- Brechot C., Degos F. and Lugassy C. (1985):** HBV-DNA in patients with chronic liver disease and negative tests for HBsAg. *N. Engl. J. Med.*, 312:270-276

- Brown JL., Carman WF. and Thomas HC.(1992):** The clinical significance of molecular variation within the HBV genome. *Hepatology* ;15:144-148.
- Brunetto MR., Arrigoni A., and Toti M.(1988):** The diagnostic significance of IgM antibody to hepatitis B core antigen, revisited. *Ital. J. Gastroenterol* 20:167.
- Brunetto MR., Stemmler M. and Schodel F.(1989):** Identification of HBV variants which can not produce precore-derived HBeAg and may be responsible for severe hepatitis. *Ital. J. Gastroent.* 21:151-54.
- Brunetto MR., Oliver F. and Bonino F. (1991):** HBV infection. In :*"Progress in hepatitis research*, (ed. Crivellio), Sorin Biomedica, Italy, p: 9-30.
- Budkowska A., Dubreuil P. and Pillot J. (1988):** Prognostic value of Pre-S2 epitopes of HBV and anti-Pre-S2 response evaluated by monoclonal assays. In:*"Viral Hepatitis and Liver Disease"*, (ed. Zukerman A.J.), Alan R. Liss Inc., New York. p. 287-289.
- Budkowska A., Dubreuil, P., and Poynard T. (1992):** Anti-pre S responses and viral clearance in chronic hepatitis B virus infection. *Hepatology*. 15:26-31.
- Buti M., Rodriguez Rrias F., Genesca J. and Arranz A.(1993):** Disappearance of serum HBV-DNA by PCR after adenine arabinoside 5' monophosphate therapy in CHB. *Liver*, 13(3):136-40.
- Bzik DJ., Debroy C., Fox BA., Pederson NE. and Person S. (1986):** The nucleotide sequence of the gB glycoprotein gene of HSV2 and comparison with the corresponding gene of HSV1. *Virology*. 155:322.

- Carman WF., Jacyna MR., and Hadziyannis S. (1989):** Mutation preventing formation of antigen in patients with chronic HBV infection. *Lancet* (ii): 588-591.
- Carman WF., Fagan EA. and Hadziyannis S. (1991):** Association of a precore genomic variant of HBV with fulminant hepatitis. *hepatol.* 14:219-222.
- Carman WF., McIntyre G. and Hadziyannis S. (1992):** Mutation of HBcAg after loss of HBeAg. *J. Hepatol.* 16:525
- Carman WF., Thomas H. and Domingo E. (1993):** Viral genetic variation: HBV as a clinical example. *lancet.* 341:349-353.
- Carter P. (1970):** Ultramicroestimation of human serum albumin binding of the cationic dye, 5,5-dibromo-4-cresolsulfonphthalein, *Microchem.J.* 15:531-539.
- Chau KH., Hargie MP. and Decker RH. (1983):** Serodiagnosis of recent hepatitis B infection by IgM class anti-HBc. *Hepatol.* 3:142.
- Chieffi PP. (1994):** Inter relationship between schistosomiasis and concomitant diseases. *Memb. Inst. Oswaldo. Cruz.* 4:291-6.
- Chuang WL., Omata M., Ehata T., Yokosuka O., Hosoda K., Imazeki F. and Ohato M. (1994):** Coinfection study of pre-core mutant and wild type hepatitis B-like virus in Ducklings. *Hepatol* 19(3):569-76.
- Cone RW. (1992):** Assays for viral nucleic acids. In: "Laboratory diagnosis of viral infections", 2nd edn. (Eds Lennette EH). Marcel dekker Inc, p: 175-194.

- Cornu C. (1993):** Detection of HBV-DNA in HBsAg chronic carriers using a LFH (Abbot HBV-DNA) and the DNA-P assay: comparison of results. *Acta. Virol - praha* 37(1):84-92.
- Courouce-Pauty AM., Drouet J., and Kleinknecht D. (1979):** HBsAg subtypes, and HBsAg-anti-HBs system. *J. Infect. Dis.*, 140:975.
- Coursaget P., Yvonnet B. and Chotard J. (1986):** Seven-year study of hepatitis B vaccine efficacy in infants from an endemic area (Sengal). *Lancet* 2:1143.
- Czaja AJ., Carpenter HA., Santrach PJ., Moore SB., and Homburger HA. (1993):** The nature and prognosis of severe cryptogenic CAH: *Gastroent* ; 104:1555-1761
- Dane DS.,Cameron CH. and Briggs M. (1970):** Virus-like particles in serum of patients with Australia antigen-associated hepatitis. *lancet* (i):695.
- Davis GI., Hoofnagle JH. and Waggoner JG. (1984):** Spontaneous reactivation of chronic HBV infection. *Gastroent*; 86:230-235.
- De Groote J., Desmet VJ., Gedigk P., Korb G., Popper H., Poulsen H. and Scheuer PJ. (1968) :** A classification of chronic hepatitis. *Lancet* :2:626-628.
- Decker RH., Kuhns MC., and Mimmus LT. (1988):** Future advanced diagnostic techniques for hepatitis B In: *Viral hepatitis and liver disease*. Zuckerman A.J., (ed.): New York, Alan R. Liss. Inc., p:231-236.
- Deinhardt F. (1980):** Predictive value of markers of hepatitis virus infection. *J. Infect. Dis.* 141:299-305.

- Deinhardt F. and Gust I.D. (1982):** Viral hepatitis. WHO Bulletin 60:661.
- Desmet VJ., Gerber M., Hoofnagle JH., Manns M. and Scheuer PJ (1994):** Classification of chronic hepatitis: diagnosis, Grading and staging. Hepatol. 19:1513-1520
- Dienstag JL. (1983):** HBV : markers and prevention. Gastroent. 83:741.
- Diodoti G., Bonetti P., Pantisso P. and Realdi G. (1988):** Serum HBsAg detected by a monoclonal assay in HBsAg-negative CLD. Hepatol, 8:1407.
- Doumas BT., Watson S. and Biggs H. (1985):** Candidate Reference method for determination of total bilirubin in serum development and validation, Clin. Chem. 31:1779.
- Dusheiko G. (1990):** The hepatotropic viruses causing acute and chronic viral hepatitis : a compendium from A to E. In: Recent advances in Gastroent, ed: Pounder -RE., Churchill Livingstone, Edinberg, First ed. p: 199-223.
- Echevarria JE., Tenorio A., Courouce AM., Leon P, and Echevarria J M (1994):** PCR can resolve some undefined cases of HBV antigenic subtyping. J. Med. Virol. 42:217-223.
- Ehata T., Omata M., Yokosuka O. and Ohto M. (1992):** Variations in codons 84-101 in the core nucleotide sequence correlate with hepatocellular injury in chronic HBV infection. J. Clin. Invest. 89:332-338.

- El Hawy AM., Abdel Rahman MM., Ibrahim MS., Abdel Rahman AM and Salama MM (1993)** : Delta virus versus HBsAg in CAH and their relation to clinical , laboratory , and morbidity findings in bilharzial and non-bilharzial patients. J. Egypt. Soc. Parasitol 23(1): 151-60.
- Enriques E. and Silvo RM. (1926)**: New Method for the determination of the bilirubin content of serum and duodenal juices, Biochem Z 169:152-160.
- Fam NS. (1994)**: Hepatitis Virus infections (A,B,D & C) among schistosomal patients. MD, Microbiology , Faculty of Medicine, Cairo Uni.
- Farghaly AG. and Barakat RM. (1992)**: The effect of raziquantel administration on the course of HB among schistosomal patients in Egypt. J.Egypt. Public Health Assoc. 67 (5-6) : 549-63.
- Farrag A., Ahmed L., Zakaria S. and Abdel-Halim A.(1988)**: Study of T and B lymphocytes in schistosomal patients. Egypt. J. Bilh. 10(1) : 53-60.
- Fattovich G., Brollo I. and Guistina G. (1992)**: Natural history and prognostic factors for CHB Gut. 32:291-298.
- Feinberg AP., Berris B. and vogelstein B. (1984)**: A technique for radiolabeling DNA restriction endonuclease fragments to high specific activity. Anal. Biochem. 137(Addedum): 266
- Feinman SV., Overby LR. and Berris B. (1982)**: The significance of IgM anti-HBc in hepatitis B carriers and hepatitis B associated liver disease Hepatol, 2:795-799.

- Feinstone MA. (1986):** Products of the "X" gene in hepatitis B and related viruses. *Hepatol* 6:191.
- Fong TL., DiBisceglie AM. and Feinstone SM. (1991):** Persistent hepatic HBV-DNA after clearance of HBsAg from serum of patients with CHB *Hepatol.* :14:130A.
- Fong TL., Di-Bisceglie AM., Gerber MA., Hoofnagle JH. (1993):** Persistence of HBV-DNA in the liver after loss of HBsAg in CHB. *Hepatol* 18(6):13138.
- Franchis RD., Meucci G. and Vecchi M. (1993):** The Natural history of asymptomatic HBsAg carriers. *Annals of Int. Med.* 118:191-194.
- Francis DP. (1983):** Strategies for control of disease in the developing world: HBV and its related diseases. *Rev. Inf. Dis.* 5:322-329.
- Friedman LS. (1995):** Liver, Biliary tract and pancreas. In: *Current Medical Diagnosis and Treatment*, (eds: Tierney LM, Mc Phee SJ and Papadakis MA), Prentice Hall international Inc. U.S.A. p: 555-73.
- Fujii H., Moriyama K., and Sakamoto N., (1992):** Glycine 145 to Arginine substitution of immune escape mutant of HBV . *Biochem. Biophys. Res. Commun.* 184:1152-1157.
- Galibert F., Mandart E. and Charnay P. (1979):** Nucleotide sequence of HBV genome cloned in *E. coli*. *Nature* 281:646-650.
- Garcia PD., Ou JH., and RutterWJ. (1988):** Targeting of the hepatitis B precore protein to the endoplasmic reticulum membrane. *J. Cell Biol.* 106: 1093-1104.

- Gerber MA. (1991):** Infections of the liver In:Textbook of Clinical Hepatol.McIntyre N., Benhamou J-P., Bircher J., Rizzetto M.and Rodes J.(eds): Oxford Vol. 1, Oxford Univ. Press, Oxford, N.Y., Tokyo. p. 530.
- Gerlich W., Leur N., and Thomssen R. (1980):** Diagnosis of acute and inapparent HBV infections by measurement of IgM anti-HBc. J. Infect. Dis., 142:95-101.
- Gerlich WH. and Thomssen R. (1991):** Terminology, structure and laboratory diagnosis of hepatitis viruses In: Textbook of clinical Hepatol.McIntyre, N., Benhamou, J-P, Bircher, J., Rizzetto, M. and Rodes, J. (eds): Oxford Vol.1, Oxford University Press, Oxford, New York, Tokyo p 537-560.
- Ghaffar YA., El-Chazli Y. and Madwar M.(1984):** Relationship of schistosomiasis to hepatitis B infection and its effect on the severity of the hepatic lesion. Egypt. J. Gastroent. 10:21:27.
- Ghaffar YA., Fattah S. and Kamel M. (1991):** The impact of endemic schistosomiasis on acute viral hepatitis. Am. J. Trop. Med. Hyg. 45(66): 743-750.
- Ghaffar YA. (1993):** Egypt: Combating liver disease. Lancet 341:1207.
- Gowans EJ., Jibert AR. and Burrell CJ. (1989):** The detection of specific DNA and RNA sequences by in situ hybridization.In: Symons RH, ed. Nucleic Acid Probes orlando: CRC Press; :139-158.
- Gui XE., Jiany YZ. and Gao SC. (1994):** The detection and significance of HBV-DNA in serum and liver of advanced schisosmiasis patients. Chung-Hua - Nei-Ko - Tsa - Chish Agu; 33 (8): 537-9.

- Hadziyannis S., Lieberman H., karvountzis G. and Shafritz D. (1983):** Analysis of liver disease, nuclear HBcAg, viral replication, and HBV DNA in liver and serum of HBeAg VS anti-HBe positive carriers of hepatitis B. *Hepatology*, 3:656-662.
- Hall DD. and Spiegelan G.(1961):** Sequence complementarity of T2-DNA and T2- specific RNA. *RNAs Wash.* 47:137
- Henry RJ., Sobel C. and Berkman S. (1957):** Interferences with biuret methods for serum proteins *Anal. Chem.* 29:1491-1495.
- Henry RJ. (1974):** *Clinical Chemistry. Principles and Techniques*, Harper and Row, New York, NY , p. 407-421.
- Hess G., Shih JWK., kaplan P.M. and gerin JL. (1977):** The demonstration of subtypes (d or y) specific determinants on the surface of the presumed HBV. *J. Immunol.*, 119:1542-1544.
- Hollinger FB. (1990):** HBV In: *Fields Virology*, B.N. Knipe, D.M. Chanock, R.M., Melnick, J.L., Roizman B. and Shope R.E. (eds): 2nd edn.. Raven press, New York p. 2171.
- Hoofnagle JH. (1974) :** Antibody to HBcAg. A sensitive indicator of HBV replication. *New England. J. Med.*, 290 : 1336.
- Hoofnagle JH., Gerely RJ. and Barker IF. (1974):** Antibody to HBV core in man., *Lancet* 11:869
- Hoofnagle JH. (1981):** Serologic markers of HBV infection. *Ann. Rev. of Med.* 32:1.
- Hoofnagle JH., Shafritz DA. and Popper H. (1987):** Chronic type B hepatitis and the "healthy" HBsAg carrier state. *Hepatology*. 7:758-763.

- Hoofnagle JH. (1990):** Acute viral hepatitis In: Principles and practice of Infs., Mandell, J.H., Douglas, R.G. and Benét, J.E. (eds): 3rd edn., Churchill Livingstone New York, Edinburgh, London, Melbourne: 1001-17.
- Hoofnagle JH. and Di Bisceglie AM. (1990):** Antiviral therapy of viral hepatitis. In: Antiviral Agents and Viral Diseases of Man. Galasso GJ, Whitley RJ, Merigan CT, eds. 3rd ed. Raven press; New York: 415-459.
- Howard CR. and Zuckerman AJ. (1990):** Viral hepatitis In: Principles of Bacteriology, Virology and Immunity Collier, L.H. and Timbury, M.C. (eds): Topley and Wilson's 8th edn. Vol. 4 Edward Arnold Press, London, Melbourne Auckland p 386-412.
- Imai M. (1982) :** Demonstration of two distinct antigenic determinants on HBeAg by monoclonal antibodies. . *J. Immunol.*, 128 : 69.
- James EB. (1985):** HBV: up date on the spectrum of clinical infection and on prophylaxis. *post-graduate Medicine*, 78:71-83.
- Jendrassik L. and Grof P. (1938):** Quantitative methods for measuring urobilinogen. *Biochemistry* 297:81.
- Johnson PJ. and McFarlane IG. (1993):** Meeting report : International autoimmune hepatitis group. *Hepatology*, 18:998-1005.
- Kabil SM. (1992) :** New concepts in virus hepatitis and HBV vaccines. *Journal of Tropical Medicine* Vol. 1., No5.

- Kabil S M., Abd El-Ghaffar Y., Madwar MA., Khalil A., Atta M. and Younes Y.(1992):** A typical virus B hepatitis in Egypt J. Trop. Med. 1, 4, 1:6.
- Kamel MA., Miller FD., El Masry AG., Zakaria S., Kattab M., Essmat G. and Ghaffar YA. (1994) :** The epidemiology of schistosoma ; hepatitis B and hepatitis C infection in Egypt. Ann. Trop-Med.Parasitol. ,88 (5): 501-9.
- Kaneko S., Miller RH. and Bi Bisceglie AM. (1990):** Detection of HBV DNA in serum by PCR. Application for clinical diagnosis. Gastroent 99:799-804.
- Karasawa T., Aizawa Y., Zeniya M. and Toda G.(1993):** Association of pre-core defective HBV mutant with anti HBe-positive chronic hepatitis. Nippon- Rinsho. 51(2) : 286 - 910.
- Keller GH. and Manak MM. (1989):** (eds.), DNA probes, MacMillan Publishers, New York.
- Khalil HM., Azab ME., Abdel Ghaffar FM., Makhlouf SA., El Zayyat EA., Kalil NM. and Ramadan NI. (1994):** Evaluation of different serological tests in mansonian schistosomiasis and correlation to HBV infection. J. Egypt-Soc. Parasitol. 24(1) : 1-12.
- Kim KC., Koike K., Saito I. and Miyamura T. (1991):** HB "X" gene of HBV induces liver cancer in transgenic mice. Nature 351:317-20.
- Kingsley GR. (1942):** The direct biuret method for the determination of serum proteins as applied to photoelectric and visual colorimetry. J. Lab. Clin. 27:840-845.

- Kitchin PA., Szotyori Z., Fromholc C. and Almond N. (1990):**
Avoidance of false positives [letter]. *Nature* 344:201
- Koff RS. (1992) :** HBV In: Infs. Gorbach, SL. Bartlet, JG. and Blacklow NR. (eds): Saunders Company Javanovich.Inc.Phil.London,Toronto,Montreal,Sydney, Tokyo. P:1003
- Kosaka Y., Tanase K. and Kojima M. (1991):** Fulminant Hepatitis B: induction by HBV mutants defective in the pre-core region and incapable of encoding e Antigen. *Gastroenterol.* 4:1087-1094.
- Kouka SE., Abdel-Wahab M. and Khalifa A. (1982):** Gazz. Egypt paed. Association 29. 145.
- Krogsgaard K. (1988):** HBV-DNA in serum. Applied molecular biology in the evaluation of hepatitis B infection. *Liver*, 8:257-283.
- Krugman S., and Giles JP. (1973):** Viral hepatitis, type B (MS-2 strain). Further observations on natural history and prevention. *N. Engl. J. Med.* 288:755-766.
- Krugman S., Overby LR. and Deinhardt F. (1979):** Viral hepatitis type B: studies on natural history and prevention re-examined. *N. Engl. J. Med.*, 300:101-106.
- Kryger P., Aldershvile J. and Mathiesen LR. (1982):** The Copenhagen hepatitis acute programme. Acute type B hepatitis among HBsAg negative patients detected by anti-HBcIgM. *Hepatology*, 2:50-53.

Kuhns MC., Mc-Namara AL., Brechot C. and Tiollais PA(1988):

New assay for the quantitative detection of HBV-DNA in human serum. In: Viral hepatitis and Liver Disease, Zuckerman, A.J. (ed.), Alan Liss, Inc. New York, N.Y. P. 258-262 .

Kuhns MC., Mc-Namara, AL. and Campbell CR.(1989): Quantitation of HBV-DNA by solution hybridization comparison with DNA polymerase and HBeAg during anti-viral therapy J. Med. Virol. 27:274-281.

Kuhns M., Mc Namara A., Mason A. and Perrillo R. (1992): Serum and liver HBV-DNA in CHB after sustained loss of surface antigen. Gastroent 103(5):1649-56.

Kumar P. and Clark M.(1994): Viral hepatitis In: Clinical medicine: A text book for medical students and doctors. 3rd edn., Bailliere lindall, London, 5:253.

Kurai K., Hno S., Kurokawa K. and Hino K. (1991): Large molecular form of serum HBeAg in chronic HBV infection: relation to liver cell damage. Hepatol 13:1057-1060.

Lai KN., Lai FM. and Leung NW. (1990): Hepatitis with isolated serum antibody to hepatitis B core antigen. Am. J. Clin. path. 93:79-83.

Landers TA., Greenberg HB. and Robinson WS.(1977): Structure of hepatitis B Dane particle DNA and nature of the endogenous DNA polymerase reaction J. Virol. 23: 368-376.

Langer PR., Waldrop AA. and Ward DC. (1981): Enzymatic synthesis of biotin labelled polynucleotides: Novel nucleic acid affinity probes. Proc. Natl. Acad. Sci. USA 78:6633

- Lawrence JB., Villnave CA. and Singer RH. (1988):** Sensitive , high-resolution chromatin and chromaosome mapping in situ: Presence and orientation of two closely integrated copies of EBV in a lymphoma line . Cell 52:51.
- LeBouvier GL. (1971):** The heterogenicity of Australia antigen. J. Infect. Dis., 123:671-675.
- LeBouvier GL (1973):** Subtypes of hepatitis B: Clinical relevance. Ann. Int. Med., 79:894-896.
- LeBouvier GL. and Williams A. (1975):** Serotypes of hepatitis Bs antigen: The problems of "new determinants. Am. J. Med. Sci. 270:165-171.
- Lee PL., Chang MH., Lee-CY. and Chen DS. (1990 a):** Changes of serum HBV-DNA and amino transferases levels during the course of CHB infection in children. Hepatol. 12:657-660.
- Lee TH., Finegold MJ. and Sheen, RF. (1990 b):** HBV transactivator "X" gene is not tumorigenic in transgenic mice. J. Virol. 64:5939-47.
- Leevy CM., Popper H. and Sherlock S. (1976):** Diseases of the liver and biliary tract. Standardization of nomenclature , diagnostic criteria, and diagnostic methodology. Government Printing Office, Washington, D.C.: U.S. p. 725
- Lemon SM., Gates NL., Simms TE. and Bacroft WH. (1981):** IgM antibody to HBcAg as a diagnostic parameter of acute infection with HBV. J. Infect. Dis., 143:803-809.

- Lenzi M., Ballardini G., Fusconi M., Volta U. and Zauli D. (1990) :** Type 2 autoimmune hepatitis and hepatitis C virus infection. *Lancet* ;335:258:259.
- Leung NW., Tam JS., Lau GT. and Li-AK. (1994):** HBV-DNA in peripheral blood leucocytes. A comparison between hepatocellular carcinoma and other HBV-related CLD: *Cancer* 73(4):1143-8.
- Levrero M., Stemler M. and Pasquinelli C. (1991):** Significance of anti-HBx antibodies in HBV infection. *Hepatology*. 13:149.
- Lewis B. (1987) :** *Genes*, 3rd ed. John Wiley & Sons. New York,
- Liang TJ., Blum HE. and Wands JR.(1990):** Characterization and biologic properties of HBV isolated from a patient without HBV serologic markers. *hepatology*.12:204-212.
- Liang TJ., Hasegawa K., Rimon N. and Wands JR.(1991):** A HBV mutant associated with and epidemic of fulminant hepatitis N. *Engl. J. Med.* 324: 1705-09.
- Lindh G. (1986):** CHB Impact of hepatitis D virus superinfection and the hepatitis Be-system on histological outcome, and correlation of the hepatitis B system to HBV-DNA, in serum. *Scand. J. Infect. Dis.*, 18(suppl. 50): 1-45.
- Lindsay K., Nizze J., Koretz R., and Gitnick G. (1986):** Diagnostic usefulness of testing for anti-HBc IgM in acute hepatitis B. *Hepatology*, 6:1325-1328.
- Lok AS., Lal CL. and Wu PC. (1988):** Prevalence of isolated antibody to hepatitis B core antigen in an area endemic for HBV infection. *Hepatology*. 8:766-770.

- Loriot MA., Marcellin P. and Bismuth E.(1992):** Demonstration of HBV- DNA by PCR in the serum and the liver after spontaneous or therapeutically induced HB Ag to anti-HB or HB Ag to anti-HB seroconversion in patients with CHB Hepatol. 15:32-36.
- Louderback A., Measley EH. and Taylor NA. (1968):** A new dye-binder technique using bromocresol purple for determination of albumin in serum Clin. Chem. 14:793-794.
- Ludwig J. (1993):** The nomenclature of CAH: an obituary. Gastroent ; 105:274-278.
- Luo KX., Zhou E., Liang ZS. and Jiang S. (1992):** Correlation between the prevalence of serum HBV-DNA and immunoserologic HBV markers in the subjects with or without hepatitis. Immunol - Invest. 21(3):275-81.
- Mackay IR., Taft LI. and Cowling DC.(1956):** Lupoid hepatitis . Lancet 8:2:1323-1330.
- Madwar MA., Tahawy M. and Strickland GT. (1989):** The relationship between uncomplicated schistosomiasis and hepatitis B infection. Trans. R. Soc. Trop. Med. Hyg. 83(2):233-236.
- Manns M., Gerken G., Kyriatsoulis A., and Meyer M. (1987):** Characterization of a new subgroup of autoimmune CAH by autoantibodies against a soluble liver antigen. Lancet 1:292-294.
- Maruyama T., Iino S., Koike K., Yasuda K. and Milich DR. (1993):** Serology of acute exacerbation in CHB virus infection. Gastroent 103:1141-1151.

- Mason A., Yoffe B., Noonan C. and Mearns M. (1992):** HBV DNA in peripheral blood mononuclear cells in CHB after HBsAg clearance. *Hepatology* 16(1):36-41.
- Maynard JE. (1982):** Control of hepatitis B by active and passive immunization *Int. Symp. of hepatitis*. Franklin. Inst. Press : Philadelphia, 379-384.
- Miller RH., (1987):** Proteolytic self-cleavage of HBV core protein may generate serum eAg. *Science* 236:722.
- Milstein C. (1980):** Monoclonal antibodies . *Scientific American*, 243 : 66.
- Minam M., Okanoue T., Nakajima E. and Kashima K. (1993):** Significance of pre-S region-defective HBV that emerged during exacerbation of chronic type B hepatitis. *hepatol.* 17:558-563.
- Moriarty AM., Dienstag JL. and Alexander H.(1985):** Antibodies to peptides detect new hepatitis B antigen: serological correlation with hepatocellular carcinoma. *Science* 227:429.
- Mushakwar IK., Rogers AI. and Dienstag, JL. (1981):** Interpretations of various serological profile of HBV infection. *Am. J. Clin. Path.* 76: 773-777.
- Negro F., Chiaberge E., Oliviero S. and hammer M. (1984):** HBV-DNA in anti-HBe positive sera. *Liver*, 4:177-183.
- Neimark S. and Rogers AI. (1982):** Viral hepatitis : a review *Am. J. Gastroenterol.* 77:431-435.
- Ockner PK. (1985):** Chronic hepatitis. In: James B. and Lloyd H. 17th edn.. textbook of Medicine. Philadelphia, London.

- Okamoto H., Yotsumoto S. and Akahane Y. (1990):** HBV with pre-core region defects prevail in persistently infected hosts along with seroconversion to the antibody against e antigen. *J. Virol.* 64:1298-303.
- Omata M., Afromudakis A. and Liew CT. (1978):** Comparison of serum HBsAg and serum anti-core with tissue HBsAg and hepatitis B core antigen. *Gastroent* 75: 1003-9.
- Omata M., Ehata T., and Yokosuka O. (1991):** Mutation in the precore region of HBV DNA in patients with fulminant and severe chronic hepatitis. *N. Engl. J. Med.* 324:1699.
- Pearce EJ, Caspar P. and Grzych JM.(1991):** Down regulation Th1 cytokine production accompanies induction of Th2 responses by a parasitic helminth, *Schistosoma mansoni* *J. Exp. Med.* 173:159-166.
- Pereira LM., Melo MC. and Lacerda C. (1994):** HBV-infection in schistosomiasis mansoni *J. Med. Virol.* 42(2): 203-6.
- Perrillo RP., Regenstein FG. and Campbell CR. (1988):** Prednisone withdrawal followed by recombinant alpha interferon in the treatment of chronic type B hepatitis. A randomized controled trial. *Ann. Intern. Med.* 109 : 95-100.
- Perrillo R., Mimms L., Robbins D., and Campbell C. (1993):** Montitoring of antiviral therapy with quantitative evaluation of HBeAg: a comparison with HBV-DNA testing. *Hepatol* 18(6):1306-12.
- Peters T. (1977):** Serum albumin: recent progress in the understanding of its structure and biosynthesis. *Clin. Chem.*; 23:5-12.

- Pinho JR., Fonseca LE., Song Y., and Miyamoto Y. (1989):** Comparison of serum HBV replication markers in patients with CHB: studies on HBeAg/HBeAb system, viral DNA-P and HBV-DNA. Rev- Inst- Med-Trop- 31(5):328-35.
- Pontisso P., Ruvoletto MG., Fattovich G. and Alberti A. (1989):** Serum HBV-DNA in anti-HBe positive patients detected by filter and LFH assays. Mol- Cell- Probes. 3(3):245-9.
- Pontisso P., Rumolletto MG. and Chemello L. (1990):** HBV binds to IgA receptors of liver cells. J. Hepatol. 11 (Suppl 2):S50.
- Popper H. (1983):** Changing concepts of the evolution of chronic hepatitis and the role of piecemeal necrosis. Hepatol. 3:758-762.
- Prince AM., Metselaar D. and Kafuko GW. (1972):** HBsAg in Wild-caught mosquitoes in Africa. Lancet. 2:247.
- Ranki M., Palva A., Virtanen M., Laaksonen M. and Soderlund H. (1983):** Sandwich hybridization as convenient method for the detection of nucleic acids in crude samples. Gene 21:77
- Rayfield M., De Cock K., Heyward W. and Goldstein L. (1988):** Mixed human immunodeficiency virus (HIV) infection in an individual : Demonstration of both HIV type 1 and type 2 proviral sequences by using PCR. J Infect. Dis. 158:1170.
- Rej R. (1977):** Effect of incubation with Mg** on the measurement of alkaline phosphatase activity, Clin. Chem. ; 23:1903-1911.

- Rigby PWS., Dieckman M., Rhodes C. and Berg P. (1977) :** Labeling deoxyribonucleic acid to high specific activity in vitro by nick-translation with DNA polymerase I. *J. Mol. Biol.* 113:237.
- Rizzetto M., Canese MG., Crivelli O. and Verme G. (1977):** Immunofluorescence detection of a new antigen antibody system (delta/anti-delta) associated with HBV in liver and in serum of HBsAg carriers. *Gut* 18:997-1003.
- Rizzetto M. (1983):** The Delta antigen. *Hepatology*, 3(5):729.
- Robinson, WS. (1989):** Hepatitis B and hepatitis D In: *Infectious Diseases* Hoeprich, P.D. and Jordan, M.C. (eds): 4th edn.. Lippincott Company. Philadelphia. p. 66-787.
- Robinson WS.(1995):** HBV and HDV. In: *Principles and practice of infectious disease*. Mandell, M.D; Benett J.E., and Dolin R., eds. Fourth edition. Churchill Livingstone. New York. 124, P: 1411.
- Saiki RK., Gelfand DH., Stoffel S., Scharf SJ., Higuchi R., Horn GT., Mullis KB. and Erlich HA.(1988):** Primer-directed enzymatic amplification of DNA with a thermostable DNA polymerase. *Science* 239:487
- Santantonio T., Pontisso P., Milella M., Chemello L., Luchena N. and Pastore G. (1990):** Detection of HBV-DNA in serum by spot hybridization technique : sensitivity and specificity of radiolabelled and biotin- labeled probes. *Ric. Clin. Lab.* 20(1) 29-35.
- Saris NE. (1978):** Revised IFCC method for aspartate aminotransferase *Clin Chem* ; 24:720-721.

- Seeff LB. (1988):** The gold standard serologic marker for HBV infectivity. *Hepato!*. 8:1711-1713.
- Shafritz DA., Lieberman HM., Iselbacher KJ., and Wands JR. (1982):** Monoclonal radioimmunoassay for HBsAg: demonstration of HBV-DNA or related sequences in serum and viral epitopes in immune complexes. *Proc. Nati Acad. Sci. USA*, 79:5675-5679.
- Sherlock, S.(1989):** Virus hepatitis In: Diseases of the liver and Biliary System. Sherlock S. (ed): 8th edn., Blackwell Scientific publication, Oxford, London, Edinburgh, Boston, Melbourne P. 301-328.
- Sherlock S. (1991):** Problems in the management of chronic viral hepatitis. In: Recent advances in viral hepatitis management . Adelphi Communications Ltd. Chesire, U.K., 17:21.
- Sherlock, S. (1992a):** Viral hepatitis. *Current Opinion in Gastroent* 8: 365-373.
- Sherlock, S. (1992b):** Viral hepatitis : Conference *Lancet* 339:802.
- Sherlock, S. and Dooley, J. (1993):** Diseases of the liver and biliary system, 9th edn. Blackwell Scientific Publication. Oxford, London, Edinburgh, Melbourne. p. 269.
- Soni PN., Khakoo SI., Dusheiko GM. (1994):** Viral Hepatitis In: recent advances in Gastroent Pounder-RE, eds. Longman group Singaphore: p 235-266.
- Stoler MH. and Broker TR. (1986):** In situ hybridization detection of human papilloma virus DNAs and messenger RNAs in genital condylomas and a cervical carcinoma. *Hum. pathol.* 17:1250

- Stricker BH. (1992) :** Drug-induced hepatic injury. 2nd edn. Amsterdam: Elsevier, :550.
- Szmuness W., Dienstag JL. and Purcell RH. (1977):** Epidemiologic aspects of hepatitis B. Am. J. Epid. 106:392-398.
- Takahashi Y., Tanaka M. and Miyakawa Y. (1979):** Free "small" and IgG associated "large" hepatitis B antigen in the serum and glomerular capillary walls of two patients with membranous glomerulonephritis. N. Engl. J. Med. , 300:814-819.
- Terazawa S., Kojima M. and Yamanaka T.(1991):** HBV mutants with pre-core region defects in two babies with fulminant hepatitis and their mothers positive for anti-HBe. Pediat. Res. 29:5.
- Tiollais P., Purcell C. and Dejean A. (1985):** The HBV . Nature 317:489.
- Uchaikin VF., Udovichenk DV., Kaganov BS., Granovsku NN. and Uspensk U.(1991):** The detection of HBV-DNA in the blood serum of children with chronic HBsAg- positive hepatitis. Vopr-Virol 36(120-2).
- Wands JR. and Zurawski VR. (1981):** High affinity monoclonal antibodies to HBsAg produced by somatic cell hybrids. Gastroent, 80:225-232.
- Wands JR., Bruns RR. and Carlson RI. (1982):** Monoclonal IgM radioimmunoassay for HBsAg. High binding activity in serum that is non reactive with conventional antibodies. Proc. Nati. Acad. Sci. USA, 79:1277-1281.

- Waterson AP., (1982):** In: clinical aspects of immunology, Lachman P.J. and Peker P.K. (eds), 4th edn., Black well Scientific Publication, Oxford, London, Edinburgh, Boston. P.1277
- WHO (1977):** Advances in viral hepatitis.Tech. Res. 602:7-62.
- WHO (1983):** Hepatitis programme. Lancet (ii): 350.
- Wilson B., and Wands J. (1987):** Recent advances in the biology and immunology of hepatitis B. Bail. Clin. Gastroent, 1:623-645.
- Willson RA. (1995):** Treatment of chronic viral hepatitis. In: Gastrointestinal and hepatic infections. Surawicz C and Owen R.L. eds. W.B. saunders USA, p. 313:353.
- Wirth S. and Zabel B. (1992):** Molecular hybridization techniques in current diagnosis of CHB in childhood. Eur. J. Pediatric 151(4)243-9.
- Wirth S., Keller KM., Baumann W. and Zabel B(1991):** HBV-DNA, Current diagnosis in children with CHB. Monatsschr-Kinderheilkd. 139(4): 202-7.
- Wroblewski F. and LaDue JS. (1956):** Serum glutamic pyruvic transaminase in cardiac and hepatic disease, proc Soc Exp Biol Med, ; 91:569.
- Zakaria S., Mabrouk MS. and Ismail AM. (1988):** The role of schistosomiasis and type B hepatitis in the pathogenesis of endemic Egyptian Heptosplenomegaly. Egypt. Soc. Parasitol. 18:421-429.

Zhang YY., Hansson BG., Widell A. and Nordenfelt E. (1993): HBV-DNA in serum and liver is commonly found in chinese patients with CLD despite the presence of antibodies to HBsAg. *Hepatol* 17:538-544.

Zuckerman A.J. (1979): Specific serologic diagnosis of viral hepatitis. *Br. med. J.* 7:84.

Zuckerman A.J. (1990): Viral hepatitis In: *Tropical Medicine* Strickland, G.T. (ed): Hunter's e 7th. edn.. Saunders Company Javonovich Inc. Philadelphia, London, Toronto, Montreal, Sydney, Tokyo. p. 186-199.