

## REFERENCES

- Ackermann, H.W. & Berthiaume, L. (1995). *Atlas of Virus Diagrams*. CRC Press, Inc. pp. 38-40.
- Abdel-Hamid, M., Chen, J.J., Constantine, N., Massoud, M. & Raab-Traub, N. (1992). Epstein-Barr virus strain variation: Geographical distribution and relation to disease state. *Virology* **190**: 168-175.
- Addlinger, H.K., Delius, H., Freese, U.K., Clarke, J. & Bornkamm, G.W. (1985). A putative transforming gene of the Jijoye virus differs from that of Epstein-Barr virus prototypes. *Virology* **141**: 221-234.
- Allaudeen, H.S. & Rani, G. (1982). Cellular and Epstein-Barr virus specific DNA polymerase in virus producing Burkitt's lymphoma cell lines. *Nucleic Acid Res.* **10**: 2453-2465.
- Alfieri, C., Birkenbach, M. & Kieff, E. (1991). Early events in Epstein-Barr virus infection of human B-lymphocytes. *Virology* **181**: 595-608.
- Atassi, M.Z. (1984). Antigenic structures of proteins. Their determination has revealed important aspects of immune recognition and generated strategies for synthetic mimicking of protein binding sites. *Eur. J. Biochem.* **145**: 1-20.
- Atherton, E., Fox, H., Harkiss, D., Logan, C.J., Sheppaard, R.C. & Williams, B.J. (1978). A mild procedure for solid phase peptide synthesis: use of fluorenylmethyloxycarbonyl (F-moc) amino acids. *J. Chem. Soc. Chem. Comm.*: 537-539.
- Armstrong, R.W., Armstrong, M.J., Yu, M.C. & Henderson, B. (1983). Salted fish and inhalants as risk factors in nasopharyngeal carcinoma in Malaysian Chinese. *Cancer Res.* **43**: 2967-2970.
- Armstrong, R.W., Imrey, P.B., Lye, M.S., Armstrong, M.J., Yu, M.C. & Sani, S. (1998). Nasopharyngeal carcinoma in Malaysian Chinese :salted fish and other dietary exposures. *Int. J. Cancer* **77**: 228-235.
- Arrand, J.R., Young, L.S. & Tugwood, J.D. (1989). Two families of sequences in the small RNA-encoding region of Epstein-Barr virus correlate with EBV type A and B. *J. Virol.* **63**: 983-986.
- Babcock, G.J., Decker, L.L., Volk, M., & Thorley-Lawson, D.A. (1998). Epstein-Barr virus persistence in memory B cells *in vivo*. *Immunity* **9**: 395-404.

- Baer, R., Bankier, A.T., Biggin, M.D., Desinger, P.L., Farrel, P.J., Gibson, T.J., Halfull, G., Hudson, G., Satchwell, C., Sequin, C., Fuffnell, P. & Barrell, B. (1984). DNA sequence and expression of the B95-8 Epstein-Barr virus genome. *Nature* **310**: 207-211.
- Benjamin, D.C., Berzofsky, J.A., East, I.E., Gurd, F.R.N., Hannum, C., Leach, S.J., Margoliash, E., Micheal, J.G., Miller, A., Prager, E.M., Reichlin, M., Sercarz, E.E., Smith-Gill, S.J., Tood, P.E. & Wilson, A.C. (1984). The antigenic structure of proteins: a reappraisal. *Ann. Rev. Immunol.* **2**: 67-101.
- Biggin, M., Bodescot, M., Perricaudet, M. & Farrel, P. (1987). Epstein-Barr virus gene expression in P3HR-1 superinfected Raji cells. *J. Virol.* **61**: 3120-3132.
- Bosshard, H.R. (1995). Epitope mapping with peptides. In: B. Gutte (ed.). *Peptides: Synthesis, Structures and Application*. Academic Press, Inc. pp. 419-454.
- Campbell, M.J. & Machin, D. (1999). *Medical Statistics: A Commonsense Approach*. 3<sup>rd</sup> Edition. John Wiley & Sons, Ltd. pp. 1-197.
- Chan, S.H., Day, N.E., Kunaratnam, N., Chua, K.B. & Simons, M.J. (1983). HLA & nasopharyngeal carcinoma in Chinese - A further study. *Int. J. Cancer* **32**: 171-176.
- Chan, S.H. (1990). Aetiology of nasopharyngeal carcinoma. *Ann. Acad. of Med. Singapore* **19**: 201-207.
- Chan, S.H., Soo, M.Y., Gan, Y.Y., Fones-Tan, A., Sim, P.S., Kaur, A. & Chew, C.T. (1998). Epstein-Barr virus (EBV) antibodies in the diagnosis of nasopharyngeal carcinoma- Comparison between IFA and two commercial ELISA kits. *Singapore Med. J.* **39**: 263-265.
- Chang, P.F. (1993). *Chinese festivals, customs and practices in Sarawak*. Ministry of Social Development, Sarawak. pp. 1-19.
- Chen, H.F., Sauter, M., Haiss, P. & Muller, L.N. (1991). Immunological characterization of Epstein-Barr virus phosphorylation PP58 and deoxyribonuclease expressed in the baculovirus expression system. *Int. J. Cancer* **48**: 879-888.
- Chen, X., De, V., Pepper, S. & Arrand, J.R. (1992). Prevalence of the A and B types of Epstein-Barr virus DNA in nasopharyngeal carcinoma biopsies from Southern China. *J. Gen. Virol.* **73**: 463-466.
- Chen, J.Y., Liu, M.Y., Hsu T.Y., Cho, S.M. & Yang, C.S. (1993). Use of bacterially expressed antigen for detection of antibodies to the Epstein-Barr virus specific deoxyribonuclease in sera from patients with nasopharyngeal carcinoma. *J. Virol. Methods* **45**: 49-66.

- Cheng, Y.C., Chen, J.Y., Hoffman, P.J. & Glaser, R. (1980). Studies on the activity of DNase associated with the replication of the Epstein-Barr virus. *Virology* **100**: 334-338.
- Cheng, H.M., Foong, Y.T., Mathew, A., Sam, C.K., Dillner, J. & Prasad, U. (1993). Screening for nasopharyngeal carcinoma with an ELISA using the Epstein-Barr virus nuclear antigen, EBNA-1: a complementary test to IgA/VCA immunofluorescence assay. *J. Virol. Methods* **42**: 45-51.
- Cheng, H.M., Foong, Y.T., AbuSamah, A.J., Dillner, J., Sam, C.K. & Prasad, U. (1995). Linear epitopes of the replication-activator protein of Epstein-Barr virus recognised by specific serum IgG in nasopharyngeal carcinoma. *Cancer Immunol. Immunother.* **40**: 251-256.
- Cheung, A. & Kieff, E. (1982). Long internal repeats in Epstein-Barr virus DNA. *J. Virol.* **44**: 286-294.
- Chew, C.T. (1990). Early diagnosis of nasopharyngeal carcinoma. *Ann. Acad. of Med. Singapore* **19**: 270-274.
- Chia, K.S. & Lee, H.P. (1997). Epidemiology. In: V.F.H. Chong & Tsao, S.Y. (eds.). *Nasopharyngeal Carcinoma*. Armour Publishing, Singapore pp. 1-5.
- Choi, P.H.K., Sven, M.W.M., Haung, D.P., Lo, K.W. & Lee, J.C.K. (1993). Nasopharyngeal carcinoma: genetic changes, Epstein-Barr virus infection, or both. A clinical and molecular study of 36 patients. *Cancer* **72**: 2873-2878.
- Chua, K.H. (1999). Epstein-Barr virus (EBV) and human herpes-6 (HHV-6) seroconversion profiles in Malaysian children and young adults. Master of Biotechnology Thesis. University Malaya, Kuala Lumpur.
- Cleary, M.L., Smith, S.D. & Sklar, J. (1986). Cloning and structural analysis of cDNAs for bcl-2 and a hybrid bcl-2/immunoglobulin transcript resulting from the t(14;18) translocation. *Cell* **47**: 19-28.
- Cohen, J.I. (1997). Herpesviruses. In: J.F. Holland, Bast, R.C., Morton, D.L., Frei, E., Kufe, D.W. & Weichselbaum, R.R. (eds.). *Cancer Medicine*. 4<sup>th</sup> Edition. Williams & Wilkins Press, Baltimore, USA. pp. 355-363.
- Countryman, J. & Miller, G. (1985). Activation of expression of latent Epstein-Barr herpes virus after gene transfer with a SmalI clones subfragment of heterogenous viral DNA. *Proc. Natl. Acad. Sci. USA* **82**: 4085-4089.
- Dambaugh, T. & Kieff, E. (1982). Identification and nucleotide sequence of two similar tandem direct repeats in Epstein-Barr virus DNA. *J. Virol.* **44**: 823-833.

- Dambaugh, T., Hennessy, K., Chamnaukit, L. & Kieff, E. (1984). U2 region of Epstein-Barr virus DNA may encode Epstein-Barr virus nuclear antigen 2. *Proc. Natl. Acad. Sci. USA* **81**: 7632-7636.
- Dardaari, R., Khyatti, M., Benider, A., Jouhadi, H., Kahlain, A., Cochet, C., Mansouri, A., El Gueddari, B., Benslimane, A. & Joab, I. (2000). Antibodies to the Epstein-Barr virus transactivator protein (ZEBRA) as a valuable biomarker in young patients with nasopharyngeal carcinoma. *Int. J. Cancer* **86**: 71-75.
- Datta, A.K., Feligny, R.Y. & Pagano, J.S. (1980). Induction of Epstein-Barr virus-associated DNA polymerase by TPA. Purification and characterization. *J. Biol. Chem.* **255**: 5120-5125.
- Dawson, C.W., Eliopoulos, A.G., Dawson, J. & Young, L.S. (1995). BHRF1, a viral homologue of the bcl-2 oncogene, disturbs epithelial cell differentiation. *Oncogene* **9**: 69-77.
- Dawson, C.W., Dawson, J., Jones, R., Ward, K. & Young, L.S. (1998). Functional differences between BHRF1, the Epstein-Barr virus-encoded bcl-2 homologue and bcl-2 in human epithelial cells. *J. Virol.* **72**: 9016-9024.
- De Silva, U., Massa, H., Trask, B.J. & Green, E.D. (1999). Comparative mapping of the region of human chromosome 7 deleted in Williams syndrome. *Genome Res.* **9**: 428-435.
- de The, G. & Zeng, Y. (1986). Population screening for Epstein-Barr virus markers: towards improvement of nasopharyngeal carcinoma control. In: M.A. Epstein & Achong, B.G. (eds.). *The Epstein-Barr virus: Recent Advances*. William Heinemann, London pp. 237- 249.
- de Turenne-Tessier, M., Ooka, T., Calender, A., de The, G. & Daille, J. (1989). relationship between nasopharyngeal carcinoma and high antibodies titres to Epstein-Barr virus specific thymidine kinase. *Int. J. Cancer* **43**: 45-48.
- Dickson, R.I. (1981). Nasopharyngeal carcinoma: an evaluation of 209 patients. *Laryngoscope* **91**: 333-354.
- Dolyniuk, M., Wolff, E. & Kieff, E.D. (1976). Proteins of Epstein-Barr virus II. Electrophoretic analysis of the polypeptides of the nucleocapsid and the glucosamine and polysaccharide containing components of enveloped virus. *J. Virol.* **18**: 289-297.
- Durda, P.J., Sullivan, M., Kieff, E., Pearson, G.R. & Rabin, H. (1993). An enzyme-linked immunosorbent assay for the measurement of human IgA antibody responses to Epstein-Barr virus membrane antigen. *Intervirology* **36**: 11-19.

- Edson, C.M. & Thorley-Lawson, D.A. (1981). Epstein-Barr virus membrane antigens:characterization, distribution and strain differences. *J. Virol.* **39**: 172-184.
- Einhorn, L. & Ernberg, I. (1978). Induction of EBNA precedes the first cellular S-phase after EBV infection of human lymphocytes. *Int. J. Cancer* **21**: 157-160.
- Epstein, A.L. (1984). Immunobiochemical characterization with monoclonal antibodies of Epstein-Barr virus-associated early antigens in chemically induced cells. *J. Virol.* **50**: 372-379.
- Epstein, M.A. & Achong, B.G (1973). The Epstein-Barr virus. *Ann. Rev. Microbiol.* **27**: 413-436.
- Epstein, M.A. & Morgan, A.J. (1983). Clinical consequences of Epstein-Barr virus infection and possible control by an anti-viral vaccine. *Clin. Exp. Immunol.* **53**: 257-271.
- Epstein, M.A., Achong, B.G. & Barr, Y.M. (1964). Virus particles in cultured lymphoblasts from Burkitt's lymphoma. *Lancet* **1**: 702-703.
- Epstein, M.A., Achong, B.G. & Barr, Y. (1965). Morphological and biological studies on a virus in cultured lymphoblasts from Burkitt's lymphoma. *J. Exp. Med.* **121**: 761-770.
- Epstein, M.A., Achong, B.G., Barr, Y.M., Zajac, B., Henle, G. & Henle, W. (1966). Morphological and virological investigations on cultured Burkitt tumour lymphoblasts (strain Raji). *J. Natl. Cancer Inst.* **37**: 547-559.
- Ernberg, I., Klein, G., Komilsby, F.M. & Silvestre, D. (1974). Differentiation between early and late membrane antigen on human lymphoblastoid cell lines infected with Epstein-Barr virus. *J. Natl. Cancer Inst.* **53**: 61-68.
- Estepa, A. & Coll, J.M. (1996). Pepscan mapping and fusion-related properties of the major phosphatidylserine-binding domain of the glycoprotein hemorrhagic septicemia virus, a salmonid rhabdovirus. *Virology* **216**: 60-70.
- Facer, C.A. & Playfair, J.H. (1989). Malaria, Epstein-Barr virus and the genesis of lymphomas. *Adv. Cancer Res.* **53**: 33-72.
- Fanidi, A., Hancock, D.C. & Littlewodd, T.D. (1998). Supression of c-myc induced apoptosis by the Epstein-Barr virus gene product BHRF1. *J. Virol.* **72**: 8392-8395.
- Farrel, P.J. (1989). Epstein-Barr virus genome. *Adv. Viral Oncol.* **8**: 103-132.

- Foghsgaard, L. & Jaattela, M. (1997). The ability of BHRF1 to inhibit apoptosis is dependent on stimulus and cell type. *J. Virol.* **71**: 7509-7517.
- Fones-Tan, A., Chan, S.H., Tsao, S.Y., Gan, L.H., Tan, W.H., Li, B., Khong, P.W. & Gan, Y.Y. (1994). Enzyme-linked immunosorbent assay (ELISA) for IgA and IgG antibodies to Epstein-Barr virus ribonucleotide reductase in patients with nasopharyngeal carcinoma. *Int. J. Cancer* **59**: 739-742.
- Gan, Y.Y., Hu, R., Chai, D., Tan, T.T., Gan, Y.H., Chan, S.H., Tsao, S.Y. & Gan, L.H. (1999). Distribution of Epstein-Barr virus antigenic sites on the carboxyl terminal end of ribonucleotide reductase against nasopharyngeal carcinoma serum antibodies using an immunoabsorption method. *J. Med. Virol.* **59**: 385-396.
- Geerligs, H.J., Weijer, W.J., Bloemhoff, W., Welling, G.W. & Welling-Westerveld, S. (1988). The influence of pH and ionic strength on the coating of peptides of herpes simplex virus type 1 in an enzyme-linked immunosorbent assay. *J. Immunol. Methods* **106**: 239-244.
- Geysen, H.M., Meloen, R.H. & Barteling, S.J. (1984). Use of peptide synthesis to probe viral antigens for epitopes to a resolution of a single amino acid. *Proc. Natl. Acad. Sci. USA* **81**: 3998-4002.
- Geysen, H.M. (1985). Antigen-antibody interactions at the molecular level: adventures in peptide synthesis. *Immunol. Today* **6**: 364-369.
- Geysen, H.M., Rodda, S.J., Mason, T.J., Tribbick, G. & Schoofs, P.G. (1987a). Strategies for epitope analysis using peptide synthesis. *J. Immunol. Methods* **102**: 259-274.
- Geysen, H.M., Tainer, J.A., Rodda, S.J., Mason, T.J., Alexander, H., Getzoff, E.D. & Lerner, R.A. (1987b). Chemistry of antibody binding to a protein. *Science* **235**: 1184-1190.
- Ginsburg, M. (1990). Antibodies against the large subunit of the EBV-encoded ribonucleotide reductase in patients with nasopharyngeal carcinoma. *Int. J. Cancer* **45**: 1048-1053.
- Goldschmidts, W., Luka, J. & Pearson, G.R. (1987). A restricted component of the Epstein-Barr virus early antigen complex is structurally related to ribonucleotide reductase. *Virology* **157**: 220-226.
- Govind, C.K., Hasegawa, A., Koyama, K. & Gupta, S.K. (2000). Delineation of a conserved B cell epitope on bonnet monkey (*Macaca radiata*) and human zona pellucida glycoprotein-B by monoclonal antibodies demonstrating inhibition of sperm egg binding. *Biol. Reprod.* **62**: 67-75.

- Greenspan, J.S., Greenspan, D., Lennette, E.T., Abrams, D.I., Conant, M.A., Petersen, V. & Freese, U.K. (1985). Replication of Epstein-Barr virus within the epithelial cells of oral 'hairy' leukoplakia, an AIDS associated lesion. *New Eng. J. Med.* **313**: 1564-1571.
- Hadar, T., Rahima, M., Kahan, E., Sidi, J., Rakowsky, E., Sarov, B. & Sarov, I. (1986). Significance of specific Epstein-Barr virus IgA and elevated IgG antibodies to viral capsid antigens in nasopharyngeal carcinoma patients. *J. Med. Virol.* **20**: 329-339.
- Heller, M., Dambaugh, T. & Elliott, K. (1981). Epstein-Barr virus DNA IX. Variation among viral DNAs from producer and nonproducer infected cells. *J. Virol.* **38**: 632-648.
- Heller, M., Henderson, A. & Kieff, E. (1982). A repeat array in Epstein-Barr virus is related to cell DNA sequences interspersed on human chromosomes. *Proc. Natl. Acad. Sci. USA* **79**: 5916-5920.
- Henderson, S., Huen, D., Rowe, M., Dawson, C., Johnson, G. & Rickinson, A. (1993). Epstein-Barr virus-encoded BHRF1 protein, a viral homologue of Bcl-2, protects human B cells from programmed cell death. *Proc. Natl. Acad. Sci. USA* **90**: 8479-8483.
- Henle, G. & Henle, W. (1966). Immunofluorescence in cells derived from Burkitt's lymphoma. *J. Bacteriol.* **91**: 1248-1256.
- Henle, W. & Henle, G. (1973). Epstein-Barr virus and infectious mononucleosis. *N. Engl. J. Med.* **288**: 263-264.
- Henle, G. & Henle, W. (1976). Epstein-Barr virus specific IgA antibodies as an outstanding feature of nasopharyngeal carcinoma. *Int. J. Cancer* **17**: 1-7.
- Henle, W. & Henle, G. (1985). Epstein-Barr virus and human malignancies. In: G. Klein (ed.). *Advances in Viral Oncology*. Raven Press, New York pp 201-238.
- Henle, G., Henle, W. & Diehl, V. (1968). Relation of Burkitt's tumour associated herpes-type virus to infectious mononucleosis. *Proc. Natl. Acad. Sci. USA* **59**: 94-101.
- Henle, W., Henle, G., Ho, H.C., Burtin, P., Cachin, Y., Clifford, P., de Schryer, A., de The, G., Diehl, V. & Klein, G. (1970a). Antibodies to Epstein-Barr virus in nasopharyngeal carcinoma, the head and neck neoplasms and control groups. *J. Nat. Cancer Inst.* **44**: 225-231.
- Henle, W., Henle, G., Zajac, B.A., Pearson, G., Waubke, R. & Scriba, M. (1970b). Differential reactivity of human serum with early antigens induced by Epstein-Barr virus. *Science* **169**: 188-190.

- Henle, G., Henle, W. & Klein, G. (1971). Demonstration of two distinct components in the early antigen complex of Epstein-Barr virus infected cells. *Int. J. Cancer* **8**: 272-282.
- Henle, G., Ho, H.C., Henle, W. & Kwan, H.C. (1973). Antibodies to Epstein-Barr virus related antigens in nasopharyngeal carcinoma . Comparison of active cases with long-term survivors. *J. Natl. Cancer Inst.* **51**: 361-369.
- Hickish, T., Robertson, D., Clarke, P., Hill, M., di Stefano, F., Clarke, C. & Cunningham, D. (1994). Ultrastructural location of BHRF1: An Epstein-Barr virus gene product which has homology with bcl-2. *Cancer Res.* **54**: 2808-2811.
- Hildesheim, A., Anderson, L.M., Chen, C.J., Cheng, Y.J., Brinton, L.A., Daly, A.K., Reed, C.D., Chen, I.H., Caporaso, N.E., Hsu, M.M., Chen, J.Y., Idle, J.R., Hoover, R.N., Yang, C.S. & Chhabra, S.K. (1997). CYP2E1 genetic polymorphisms and risk of nasopharyngeal carcinoma in Taiwan. *J. Natl. Cancer Inst.* **89**: 1207-1212.
- Hinuma, Y., Konn, M., Yamaguchi, J., Wudarski, D.J., Blakeslee, J.R. Jr. & Grace, J.T. Jr. (1967). Immunofluorescence and herpes-type virus particles in the P3HR-1 Burkitt's lymphoma cell line. *J. Virol.* **1**: 1045-1051.
- Ho, J.H.C. (1972). Nasopharyngeal carcinoma (NPC). *Adv. Cancer Res.* **15**: 57-92.
- Ho, J.H.C. (1978). An epidemiologic and clinical study of nasopharyngeal carcinoma. *Int. Rad. Oncol. Biol. Phys.* **4**: 181-198.
- Ho, J.H.C., Ng, M.H., Kwan, H.C. & Chan, J.C.W. (1976). Epstein-Barr virus specific IgA and IgG serum antibodies in nasopharyngeal carcinoma patients and controls. *Br. J. Cancer* **34**: 655-660.
- Ho, J.H.C., Kwan, H.C., Ng, M.H. & de-The, G. (1978). Serum IgA antibodies to EBV capsid antigens preceding symptoms of nasopharyngeal carcinoma. *Lancet* **I**: 436-437.
- Ho, J.H.C., Lau, W.H., Kwan, H.C., Chan, C.L., Au, G.K.H., Sau, D. & de-The, G. (1981). Diagnostic and prognostic serological markers in nasopharyngeal carcinoma. In: G.R.F. Krueger & Ablashi, D.V. (eds.). *Cancer Campaign* Vol. 1. Gustav, Fisher Verlag Stuttgart, New York. pp. 219-224.
- Hoagland, R.J. (1955). The transmission of infectious mononucleosis. *Am. J. Med. Sci.* **229**: 262-272.
- Horner, D., Lewis, M. & Farrell, P.J. (1995). Novel hypotheses for the roles of EBNA-1 and BHRF1 in EBV related cancers. *Intervirology* **38**: 195-205.

- Howe, J.G. & Steitz, J.A. (1986). Localization of Epstein-Barr virus encoded small RNAs by in situ hybridization. *Proc. Natl. Acad. Sci. USA* **83**: 9006-9010.
- Hu, L.F., Zabarovsky, E.R., Chen, F., Cao, S.L., Ernberg, I., Klein, G. & Winberg, G. (1991). Isolation and sequencing of the Epstein-Barr virus BNLF-1 gene (LMP1) from a Chinese nasopharyngeal carcinoma. *J. Gen. Virol.* **72**: 2399-2409.
- Huang, D.P., Ho, J.H.C., Webb, K.S., Wood, J. & Gough, T.A. (1981). Volatile nitrosamines in salt preserved fish before and after cooking. *Fd Cosmet Toxicol* **19**: 167-171.
- Huang, D.P., Ho, J.H.C., Chan, W.K., Lau, W.H. & Lui, M. (1989). Cytogenetics of undifferentiated nasopharyngeal carcinoma xenografts from Southern Chinese. *Int. J. Cancer* **43**: 936-939.
- Huang, D.P., Lo, K.W., Choi, P.H.K., Ng, A.Y.T., Tsao, S.Y., Yiu, G.K.C. & Lee, J.C.K. (1991). Loss of heterozygosity on the short arm of chromosome 3 in nasopharyngeal carcinoma. *Cancer Genet. Cytogenet.* **54**: 91-99.
- Hurley, E. & Thorley-Lawson, D.A. (1988). B-cell activation and the establishment of Epstein-Barr virus latency. *J. Exp. Med.* **168**: 2059-2075.
- Information Malaysia Yearbook (2000). Population and Sarawak. Berita Publishing, Kuala Lumpur. pp. 73-76, 950-959.
- Johannsen, E., Koh, E., Mosialos, G., Tong, X., Kieff, E. & Grossman, S. (1995). Epstein-Barr virus nuclear protein 2 transactivation of the latent membrane protein 1 promoter is mediated by J kappa and PU.1. *J. Virol.* **69**: 253-262.
- Jondal, M., Klein, G., Oldstone, M., Bokish, V. & Yefenof, E. (1976). Surface markers on human B and T lymphocytes VIII: association between complement and Epstein-Barr virus receptors on human lymphoid cells. *Scand. J. Immunol.* **5**: 401-410.
- Kenny, S., Kamine, J., Holley-Guthrie, E., Lin, J.C., Mar, E.C. & Pagano, J. (1989). The Epstein-Barr virus (EBV) BZLF1 immediate-early gene product differentially affects latent versus productive EBV promoters. *J. Virol.* **63**: 1729-1736.
- Kelly, C.G., Todryk, S., Kendal, H.L., Munro, G.H. & Lehner, T. (1995). T-cell adhesion and B-cell epitopes of the cell surface. *Streptococcus mutans* protein antigen I/II. *Infect. Immun.* **63**: 3649-3658.
- Khan, G., Miyashita, E.M., Yang, B., Babcock, G.J. & Thorley-Lawson, D. (1996). Is Epstein-Barr virus persistence *in vivo* a model for B cell homeostasis? *Immunity* **5**: 173-179.

- Kieff, E. (1996). Epstein-Barr virus and its replication. In: B.N. Fields, Knipe, D.M. & Howley, P.M. (eds.). *Fields Virology*. 3<sup>rd</sup> Edition. Lippincott-Raven Publishers, Philadelphia. pp. 2433-2395.
- King, Y.T. (1993). *The Peoples of Borneo*. Blackwell Oxford, UK. pp. 29-55.
- Kishishita, M., Luka, J., Vroman, B., Poduslo, J.F. & Pearson, G.R. (1984). Production of monoclonal antibodies to a late intracellular Epstein-Barr virus induced antigen. *Virology* **133**: 363-375.
- Klein, G., Clifford, P., Klein, E. & Stjernsward, J. (1966). Search for tumour-specific immune reaction in Burkitt's lymphoma patients by the membrane immunofluorescence reaction. *Proc. Natl. Acad. Sci. USA* **55**: 1628-1635.
- Klein, G. & Dombos, L. (1973). Relationship between the sensitivity of Epstein-Barr virus carrying lymphoblastoid lines to superinfection and the inducibility of the resident viral genome. *Int. J. Cancer* **11**: 327-337.
- Klein, G., Giovanella, B.C., Lindahl, T., Fialkow, P.J., Singh, S. & Stehlin, J.S. (1974). Direct evidence for the presence of Epstein-Barr virus DNA and nuclear antigen in malignant epithelial cells from patients with poorly differentiated carcinoma of the nasopharynx. *Proc. Natl. Acad. Sci. USA* **71**: 4737-4741.
- Komano, J., Maruo, S., Kurozumi, K., Oda, T. & Takada, K. (1999). Oncogenic role of Epstein-Barr virus encoded RNAs in Burkitt's lymphoma cell line Akata. *J. Virol.* **73**: 9827-9831.
- Krueger, G.R.F. & Wustrow, J. (1981). Current histological classification of nasopharyngeal carcinoma (NPC) at Cologne University. In: E. Grundmann, Krueger, G.R.F. & Ablashi, D.V. (eds.). *Nasopharyngeal carcinoma Cancer Campaign* Vol. 5. Gustav Fisher Verlag, New York pp. 11-25.
- Krueger, G.R.F., Kottaridis, S.D., Wolf, H., Ablashi, D.V., Sesterhenn, K. & Bertram, G. (1981). Histological types of nasopharyngeal carcinoma as compared to Epstein-Barr virus serology. *Antinuclear Res.* **1**: 187-194.
- Kulwichit, W., Edwards, R.H., Davenport, E.M., Baskar, J.F., Godfrey, V. & Raab-Traub, N. (1998). Expression of the Epstein-Barr virus latent membrane protein 1 induces B cell lymphoma in transgenic mice. *Proc. Natl. Acad. Sci. USA* **95**: 11963-11968.
- Kumar, V., Jayasuryan, N., Reddi, H., Sahal, D. & Panda, S.K. (1998). A monoclonal antibody against the X protein of hepatitis B virus: fine mapping of its epitope and application in a quantitative ELISA of the X protein in sera of Hepatitis B patients. *Hybridoma* **17**: 157-164.

- Lanier, A.P., Bornkamm, G.W., Henle, W., Henle, G., Bender, T.R., Talbot, M.L. & Dohan, P.H. (1981). Association of Epstein-Barr virus with nasopharyngeal carcinoma in Alaskan native patients: serum antibodies and tissue EBNA and DNA. *Int. J. Cancer* **28**: 301-305.
- Laux, G., Perricaudet, M. & Farrell, P.J. (1988). A spliced Epstein-Barr virus gene suppressed in immortalized lymphocytes is created by circularization of the linear viral genome. *EMBO J.* **7**: 767-774.
- Lawrence, J.B., Singer, R.H. & Marselle, L.M. (1989). Highly localized tracks of specific transcripts within interphase nuclei visualized by *in situ* hybridization. *Cell* **57**: 493-502.
- Leinikki, P., Lehtinen, M., Hytö, H., Parkkonen, P., Kantanen, M.L. & Hakulinen, J. (1993). Synthetic peptides as diagnostic tools in virology. *Adv. Virus Res.* **42**: 149-185.
- Lee, H.P., Gourley, L., Duffy, S.W., Esteve, J., Lee, J. & Day, N.E. (1994). Preserved foods and nasopharyngeal carcinoma: a case-control study among Singapore Chinese. *Int. J. Cancer* **59**: 584-590.
- Levitskaya, J., Shapiro, A., Leonchiks, A., Ciehanover, A. & Masucci, M.G. (1997). Inhibition of ubiquitin/proteasome-dependent protein degradation by the Gly-Ala repeat domain of the Epstein-Barr virus nuclear antigen 1. *Proc. Natl. Acad. Sci. USA* **94**: 12616-12621.
- Li, C.C., Yu, M.C. & Henderson, B.E. (1985). Some epidemiologic observations of nasopharyngeal carcinoma in Guangdong, People's Republic of China. *Natl. Cancer Inst. Monogr.* **64**: 49-52.
- Liebowitz, D. (1998). Epstein-Barr virus and a cellular signaling pathway in lymphomas from immunosuppressed patients. *New Engl. J. Med.* **338**: 1413-1421.
- Lim, M. & Chan, S.H. (1996). C4 and 21-hydroxylase gene deletions in nasopharyngeal carcinoma among Chinese. *Ann. Acad. of Med. Singapore* **25**: 42-44.
- Lindahl, T., Adams, A., Bjursell, G., Bornkamm, G.W., Kaschka-Dierich & Jehn, V. (1976). Covalently closed circular duplex DNA of Epstein-Barr virus in human lymphoid cell line. *J. Mol. Biol.* **102**: 511-530.
- Littler, E., Baylis, S.A., Zeng, Y., Conway, M.J., Mackett, M. & Arrand, J.R. (1991). Diagnosis of nasopharyngeal carcinoma by means of recombinant Epstein-Barr virus proteins. *Lancet* **337**: 685-689.

- Liu, M.Y., Shih, Y.Y., Chou, S.P., Chen, C.J., Sheen, T.S., Yang, C.S. & Chen, J.Y. (1998). Antibody against the Epstein-Barr virus BHRF1 protein, a homologue of Bcl-2 in patients with nasopharyngeal carcinoma. *J. Med. Virol.* **56**: 179-185.
- Luka, J., Siegert, W. & Klein, G. (1977). Solubilisation of the Epstein-Barr virus determined nuclear antigen and its characterisation as a DNA binding protein. *J. Virol.* **22**: 1-8.
- Luka, J., Kalli, B. & Klein, G. (1979). Induction of the Epstein-Barr virus (EBV) cycle in latently infected cells by n-butyrate. *Virology* **94**: 228-231.
- Luka, J., Chase, R.C. & Pearson, G.R. (1984). A sensitive enzyme linked immunosorbent assay (ELISA) against the major EBV-associated antigens. I. Correlations between ELISA and immunofluorescence titres using purified antigens. *J. Immunol. Methods* **67**: 146-156.
- Lynn, T.C., Tu, S.M. & Kawamura, A. (1985). Long-term follow-up for IgG and IgA antibodies against viral capsid antigens of Epstein-Barr virus in nasopharyngeal carcinoma. *J. Laryng. Otol.* **99**: 567-572.
- Mathew, M., Cheng, H.M., Sam, C.K., Joab, I., Prasad, U. & Cochet, C. (1994). A high incidence of serum IgG antibodies to the Epstein-Barr virus replication activator protein in nasopharyngeal carcinoma. *Cancer Immunol. Immunother.* **38**: 68-70.
- Meloen, R.H., Puijk, W.C. & Meijer, D.J.A. (1988). Use of peptides to locate and characterize epitopes. In: H. Ginsberg, Brown, F. & Lesner, R. (eds.). *Vaccines 88*. Cold Spring Laboratory Press, New York pp. 35.
- Meloen, R.H., Puijk, W.C., Langeveld, J.P.M., Langedijk, J.P.M., van Amerongen, A. & Schaaper, W.M.M. (1995). Pepscan to determine T and B cell epitopes. In: D.Z. Netty, Boersman, W.J.A. & Claassen, E. (eds.). *Immunological Recognition of Peptides in Medicine and Biology*. CRC Press, Inc pp. 15-31.
- Merrifield, R.B. (1963). Solid phase peptide synthesis. The synthesis of a tetrapeptide. *J. Am. Chem. Soc.* **85**: 2149-2154.
- Micheau, C.H., Rilke, F. & Pilotti, S. (1978). Proposal for a new histopathological classification of the carcinomas of the nasopharynx. *Tumori* **64**: 513-518.
- Middeldorp, J.M. & Meloen, R.H. (1988). Epitope-mapping of the Epstein-Barr virus major capsid protein using systematic synthesis of overlapping oligopeptides. *J. Virol. Methods* **21**: 147-159.

- Miller, G. & Hutt-Fletcher, L.M. (1988). A monoclonal antibody to glycoprotein gp85 inhibits fusion but not attachment to Epstein-Barr virus. *J. Virol.* **62**: 2366-2372.
- Miller, C.L., Burkhardt, A.L., Lee, J.H., Stealey, B., Longnecker, R., Bolen, J.B. & Kieff, E. (1995). Integral membrane protein 2 of Epstein-Barr virus regulates reactivation from latency through dominant negative effects on protein-tyrosine kinases. *Immunity* **2**: 155-166.
- Moghaddam, A., Rosenzweig, M., Lee-Parritz, D., Annis, B., Johnson, R.P. & Wang, F. (1997). An animal model for acute and persistent Epstein-Barr virus infection. *Science* **276**: 2030-2033.
- Morgan, D.G., Niederman, J.C., Miller, G., Smith, H.W. & Dowaliby, J.M. (1979). Site of Epstein-Barr virus replication in the oropharynx. *Lancet* **2**: 1154-1157.
- Mosialos, G., Birkenbach, M., Yalamanchili, R., VanArsdale, T., Ware, C. & Kieff, E. (1995). The Epstein-Barr virus transforming protein LMP1 engages signaling proteins for the tumour necrosis factor receptor family. *Cell* **80**: 389-399.
- Mueller-Lantzsch, N., Georg, B., Yamamoto, N. & zur Hausen, H. (1980). Epstein-Barr virus induced proteins II. Analysis of surface polypeptides from Epstein-Barr virus producing and super infected cells by immunoprecipitation. *Virology* **102**: 401-411.
- Neel III, H.B., Pearson, G.R., Weiland, L.H., Taylor, W.F., Goepfert, H.H., Pilch, B.P., Lanier, A.P., Huang, A.T., Hyams, V.J., Levine, P.H., Henle, W. & Henle, G. (1980). Anti-EBV serologic tests for nasopharyngeal carcinoma. *Laryngoscope* **90**: 1981-1990.
- Neel III, H.B., Pearson, G.R. & Taylor, W.F. (1985). Evaluation of Epstein-Barr virus serologic analysis in North American patients in nasopharyngeal carcinoma and in comparison groups. In: P.H. Levine, Ablashi, D.V., Pearson, G.R. & Kottaridis, S.D. (eds.). *Epstein-Barr Virus and Associated Disease*. Nijhoff Publication, Boston pp. 164-179.
- Ng, M.H., Ho, H.C. & Kwan, H.C. (1978). The genetic and antigenic basis for the IgA antibody response to Epstein-Barr viral capsid antigen. In: G. de-The & Ho, Y. (eds.). *Nasopharyngeal carcinoma: Etiology and Control*. IARC Scientific publications, Lyon pp. 449-458.
- Niederman, J.C., Evans, A.S., Subrahmanyam, L. & McCollum, R.W. (1970). Prevalence incidence and persistence of Epstein-Barr virus antibody in young adults. *N. Engl. J. Med.* **212**: 361-365.

- Ning, J.P., Yu, M.C., Wang, Q.S. & Henderson, B.E. (1990). Consumption of salted fish and other risk factors for nasopharyngeal carcinoma in Tianjin, a low-risk region of NPC in the People's Republic of China. *J. Natl. Cancer Inst.* **82**: 291-260.
- Norhanum, A.W. (1989). Epidemiology and immunology of nasopharyngeal carcinoma. PhD Thesis. University Malaya, Kuala Lumpur.
- Okano, M., Thiele, G.M., Davis, J.K., Grierson, H.L. & Purtilo, D.T. (1988). Epstein-Barr virus and human disease: recent advances in diagnosis. *Clin. Microbiol. Rev.* **1**: 300-312.
- Old, L.J., Boyse, E.A., Oettgen, H.E., De Harven, E., Geering, G., Williamson, B. & Clifford, P. (1966). Precipitating antibody in human sera to an antigen present in cultured Burkitt's lymphoma. *Proc. Natl. Acad. Sci. USA* **56**: 1699-1704.
- Parkin, D.M., Whelan, S.L., Ferlay, J., Raymond, L. & Young, J. (1997). *Cancer Incidence in Five Continents (Volume VII)*. IARC Scientific Publications, Lyon pp. 334-337, 422-433.
- Pearson, G.R. (1980). Epstein-Barr virus immunology. In: G. Klein (ed.). *Viral Oncology*. Raven Press, New York pp. 739-767.
- Pearson, G.R. & Luka, J. (1986). Characterization of the virus-determined antigens. In: M.A. Epstein & Achong, B.G. (eds.). *The Epstein-Barr Virus: Recent Advances*. William Heinemann, London pp. 47-74.
- Pearson, G.R., Henle, G. & Henle, W. (1971). Production of antigens associated with Epstein-Barr virus in experimentally infected lymphoblastoid cell lines. *J. Natl. Cancer Inst.* **46**: 1243-1250.
- Pearson, G.R., Dewy, F., Klein, G., Henle, G. & Henle, W. (1978). relation between neutralisation of Epstein-Barr virus and antibodies to cell membrane antigens induced by the virus. *J. Natl. Cancer Inst.* **45**: 989-995.
- Pearson, G.R., Vroman, B., Chase, B., Sculley, T., Hummel, M. & Kieff, E. (1983a). Identification of polypeptide components of the Epstein-Barr virus early antigen complex using monoclonal antibodies. *J. Virol.* **47**: 193-201.
- Pearson, G.R., Weiland, L.H., Neel, H.B., Taylor, W., Earle, J., Multoney, S.E., Goepfert, H., Talvot, M.L., Pilch, B., Goodman, M., Huang, A., Levine, P.H., Hyams, V., Moran, E., Henle, G. & Henle, W. (1983b). Application of Epstein-Barr virus serology to the diagnosis of North American nasopharyngeal carcinoma. *Cancer* **51**: 260-268.

- Pearson, G.R., Taylor, W., Mulroney, S., Weiland, L.H. & Neel III, H.B. (1983c). Clinical immunovirology: current status. In: U. Prasad, Ablashi, D.V., Levine, P.H. & Pearson, G.R. (eds.). *Nasopharyngeal carcinoma- Current Concepts*. University Malaya Press, Kuala Lumpur pp. 87-98.
- Pearson, G.R., Luka, J., Petti, L., Sample, J., Birkenbach, M., Braun, D. & Kieff, E. (1987). Identification of an Epstein-Barr virus early gene encoding a second component of the restricted early antigen complex. *Virology* **160**: 151-161.
- Pfitzner, A.J., Tsai, E.C., Strominger, J.L. & Speck, S.H. (1987). Isolation and characterization of cDNA clones corresponding to transcripts from the BamH1 H and F regions of the Epstein-Barr virus genome. *J. Virol.* **61**: 2902-2909.
- Prasad, U., Ablashi, D.V., Prathap, K., Yadav, M., Singaram, S.P., Singh, P. & Singh, J. (1983). Problem of occult primary in nasopharyngeal carcinoma. In: U. Prasad, Ablashi, D.V., Levine, P.H. & Pearson, G.R. (eds.). *Nasopharyngeal carcinoma- Current Concepts*. University Malaya Press, Kuala Lumpur pp. 11-15.
- Prasad, U. & Rampal, L. (1992). Descriptive epidemiology of nasopharyngeal carcinoma in Peninsular Malaysia. *Cancer Causes and Controls* **3**: 179-182.
- Prathap, K., Prasad, U. & Ablashi, D.V. (1983). The pathology of nasopharyngeal carcinoma in Malaysians. In: U. Prasad, Ablashi, D.V., Levine, P.H. & Pearson, G.R. (eds.). *Nasopharyngeal carcinoma- Current Concepts*. University Malaya Press, Kuala Lumpur pp. 55-63.
- Pritchett, R., Pedersen, M. & Kieff, E. (1976). Complexity of Epstein-Barr virus homologous DNA in continuous lymphoblastoid cell lines. *Virology* **74**: 227-231.
- Pulvertaft, R.J.V. (1965). A study of malignant tumours in Nigeria by short-term tissue culture. *J. Clin. Path.* **18**: 261-273.
- Puthavathana, P., Kositanont, U., Chongkolwatana, C., Methetraairut, C., Chantarakul, N., Nuntarakchaikul, S. & Wasi, C. (1993). Prevalence of IgA specific antibodies to Epstein-Barr virus capsid and early antigens in of nasopharyngeal carcinoma. *Asian Pac. J. Aller. Immuno.* **11**: 39-43.
- Raab-Traub, N. & Flynn, K. (1986). The structure of the termini of the Epstein-Barr virus as a marker of clonal cellular proliferation. *Cell* **47**: 883-889.
- Raab-Traub, N., Flynn, K. & Pearson, G. (1987). The differentiated form of nasopharyngeal carcinoma contains Epstein-Barr virus DNA. *Int. J. Cancer* **39**: 25-29.

- Reedman, B.M. & Klein, G. (1973). Cellular localisation of an Epstein-Barr virus associated complement-fixing antigen in producer and non-producer lymphoblastoid cell lines. *Int. J. Cancer* **11**: 499-520.
- Rickinson, A.B., Moss, D.J., & Pope, J.H. (1979). Long term T-cell mediated immunity to Epstein-Barr virus in man. II. Components necessary for regression in virus-infected leucocyte cultures. *Int. J. Cancer* **23**: 610-617
- Rickinson, A.B., Yao, Q.Y. & Wallace, L.E. (1985). The Epstein-Barr virus as a model of virus-host interactions. *Br. Med. Bull.* **41**: 75-79.
- Rodda, S.J., Geysen, H.M., Mason, T.J. & Schoofs, P.G. (1986). The antibody response to myoglobin-I. Systematic synthesis of myoglobin peptides reveals location and substructure of species dependent continuous antigenic determinants. *Mol. Immunol.* **23**: 603-610.
- Rodda, S.J. & Tribbick, G. (1996). Antibody defined epitope mapping using the multipin method of peptide synthesis. *Methods in Enzymology* **9**: 473-481.
- Rodda, S.J., Geysen, H.M. & Tribbick, G. (1996). Epitope delineation using multiple peptide synthesis. In: M.H.V. van Regenmortel (ed.). *Structure of Antigens*. CRC press Inc. pp. 37-60.
- Rothwell, R.I. (1978). Carcinoma of the nasopharynx in Sabah (Malaysia). *South-East Asian J. Surg.* **1**: 88-95.
- Sam, C.K., Prasad, U. & Patmanathan, R. (1989). Serological markers in the diagnosis of histopathological types of nasopharyngeal carcinoma. *Eur. J. Sur. Onco.* **15**: 357-360.
- Sam, C.K., Abu Samah, A.J. & Prasad, U. (1994). IgA/VCA as a follow-up marker in the monitoring of nasopharyngeal carcinoma. *Eur. J. Sur. Onco.* **20**: 561-564.
- Sample, J., Young, L.S., Martin, B., Chatman, T., Rickinson, A.B. & Kieff, E. (1990). Epstein-Barr virus types 1 and 2 differ in their EBNA-3A, EBNA-3B and EBNA- 3C genes. *J. Virol.* **64**: 4084-4092.
- Scanlon, P.W., Rhodes, R.E., Woolner, L.B., Levine, K.D. & McBean, J.B. (1967). Cancer of the nasopharynx: 142 patients treated in the 11 years period 1950-1960. *Am. J. Roentgenol* **99**: 313-325.
- Scully, T.B., Cross, S.M., Burrow, P. & Cooper, D.A. (1988). Prevalence of antibodies to EBNA 2B in persons infected with the human immunodeficiency virus. *J. Infect. Dis.* **158**: 186-192.

- Shanmugaratnam, K. (1984). Histological aspects of nasopharyngeal carcinoma. In: G. Wagner & Zhang, Y.H. (eds.). *Cancer of the liver, esophagus and nasopharynx*. Springer-Verlag pp.152-159.
- Shanmugaratnam, K. & Sabin, L.H. (1978). Histological typing of upper respiratory tract tumors. *Int. Typ. Tumors* **19**: 32-33.
- Shimakage, M., Dezawa, T. & Chatani, M. (2000). Proper use of serum antibody titres against Epstein-Barr virus in nasopharyngeal carcinoma: IgA/virus capsid antigen for diagnosis and EBV-related nuclear antigen-2 for follow-up. *Acta Otolaryngol.* **120**: 100-104.
- Sigel, G., Schillinger, M., Henninger, K. & Bauer, G. (1994). *J. Med. Virol.* **43**: 222-227.
- Simons, M.J. & Shanmugaratnam, K. (1982). The biology of nasopharyngeal carcinoma. *UICC Technical Report Series*. Vol. 71. UICC, Geneva. pp.16-19.
- Simons, M.J., Kwan, S.B., Day, N.E., Wee, G.B., Hawkins, B.R., de The, G & Shanmugaratnam, K. (1973). Immunogenetic studies of South East Asian ethnic groups with high and low risk for NPC. In: W. Nakahara, Kirayama, T., Nishioka, K. & Sugano, H. (eds.). *Analytic and Experimental Epidemiology of Cancer*. Proc. 3<sup>rd</sup> Inst. Cancer Symposium of the Princess Takamatsu Cancer research Fund. Univ. of Tokyo Press, Tokyo. pp. 171.
- Simons, M.J., Wee, G.B., Day, N.E., Morris, P.J., Shanmugaratnam, K. & de The, G (1974). Immunogenetic aspects of nasopharyngeal carcinoma: I. Differences in HLA-antigen profiles between patients and comparison groups. *Int. J. Cancer* **13**: 122-134.
- Simons, M.J., Wee, G.B., Singh, D., Dharmalingham, S., Yong, N.K., Chau, J.C.W., Ho, J.H.C., Day, N.E., & de The, G. (1977). Immunogenetic aspects of nasopharyngeal carcinoma: V. Conformation of a Chinese-related HLA profile (A2 Singapore 2) associated with an increased risk in Chinese for NPC. *Natl. Cancer Inst. Monograph* **47**: 147-152.
- Silverte, D., Kourilsky, F.M., Klein, G., Yata, Y., Neuport-Sautes, C. & Levy, J.P. (1971). Relationship between EBV-associated membrane antigen on Burkitt's lymphoma cells and the viral envelope demonstrated by immunoferritin labelling. *Int. J. Cancer* **8**: 222-233.
- Sixbey, J.W., Nedrud, J.G., Raab-Traub, N., Hanes, R.A. & Pagano, J.S. (1984). Epstein-Barr virus replication in oropharyngeal epithelial cells. *New Engl. J. Med.* **310**: 1225-1230.

- Sixbey, J.W., Shirley, P., Chesney, P.J., Buntin, D.M. & Resnick, L. (1989). Detection of a second widespread strain of Epstein-Barr virus. *Lancet* **2**: 761-765.
- Skinner, D.W., van Hasselt, C.A. & Tsao, S.Y. (1991). Nasopharyngeal carcinoma: modes of presentation. *Ann. Oto. Rhinol. Laryngol.* **100**: 544-551.
- Sudgen, B., Phelps, M. & Domoradzki, J. (1979). Epstein-Barr virus is amplified in transformed lymphocytes. *J. Virol.* **31**: 590-595.
- Sumaya, C.V. & Ench, Y. (1986). Epstein-Barr virus infections in families: The role of children with infectious mononucleosis. *J. Infect. Dis.* **154**: 842-850.
- Summers, W.P. & Klein, G. (1976). Inhibition of Epstein-Barr virus DNA synthesis and late gene expression. *J. Virol.* **18**: 151-155.
- Takada, K., Fugiwara, S., Yano, S. & Osato, T. (1983). Monoclonal antibody specific for capsid antigen of Epstein-Barr virus. *Med. Microbiol. Immunol.* **171**: 225-231.
- Tam , J. S. & Murray, H.G. (1990). Nasopharyngeal carcinoma and Epstein-Barr virus- associated serological markers. *Ear Nose and Throat J.* **69**: 261-267.
- Tam, J. S. (1991). Epstein-Barr virus serological markers. In: C.A. van Hasselt & Gibb, A.G. (eds.). *Nasopharyngeal Carcinoma*. The Chinese University Press, Hong Kong pp. 145-156.
- Tarodi, B., Subramanian, T. & Chinnadurai, G. (1994). Epstein-Barr virus BHRF1 protein protects against cell death induced by DNA-damaging agents and heterologous viral infection. *Virology* **201**: 404-407.
- Taylor, N., Countryman, J., Rooney, C., Katz, D. & Miller, G. (1989). Expression of the BZLF1 latency-disrupting gene differs in standard and defective Epstein-Barr viruses. *J. Virol.* **63**: 1721-1728.
- Thorley-Lawson, D.A. & Poodry, C.A. (1982). Identification and isolation of the main component (gp350-gp220) of Epstein-Barr virus responsible for generating neutralizing antibodies *in vivo*. *J. Virol.* **43**: 730-736.
- Thorley-Lawson, D.A., Edson, C.M. & Geilinger, K. (1982). Epstein-Barr virus antigens- a challenge to modern biochemistry. *Adv. Cancer Res.* **36**: 295-348.
- Trifilieff, E., Dubs, M.C. & van Regenmortel, M.H.V. (1991). Antigenic cross-reactivity potential of synthetic peptides immobilized on polyethylene rods. *Mol. Immunol.* **28**: 889.

- Uchida, J., Yasui, T., Takaoka-Shichijo, Y., Muraoka, M., Kulwichit, W., Raab-Traub, N. & Kikutani, H. (1999). Mimicry of CD40 signals by Epstein-Barr virus LMP1 in B-lymphocyte responses. *Science* **286**: 300-303.
- Uen, W.C., Luka, J. & Pearson, G.R. (1988). Development of an enzyme-linked immunosorbent assay (ELISA) for detecting IgA antibodies to the Epstein-Barr virus. *Int. J. Cancer* **41**: 479-482.
- Vassiliadou, I., Leondiadis, I., Ferderigos, N., Ithakissios, D.S., Evangelatos, G.P. & Livaniou, E. (1999). Investigation of the epitope structure of thymosin beta 10 by epitope mapping experiments. *Peptides* **20**: 411-414.
- Vroman, B., Luka, J., Rodriguez, M. & Pearson, G.R. (1985). Characterization of a major protein with a molecular weight of 160,000 associated with the viral capsid of Epstein-Barr virus. *J. Virol.* **53**: 107-113.
- Wang, F., Liebowitz, D. & Kieff, E. (1985). An EBV membrane protein expressed in immortalized lymphocytes transforms established rodent cells. *Cell* **43**: 831-840.
- Wang, F., Gregory, C., Sample, C., Rowe, M., Liebowitz, D., Murray, R., Rickinson, A. & Kieff, E. (1990). Epstein-Barr virus latent membrane protein (LMP1) and nuclear proteins 2 and 3C are effectors of phenotypic changes in B-lymphocytes: EBNA 2 and LMP 1 cooperatively induce CD23. *J. Virol.* **64**: 2309-2318.
- Weiland, L.H. (1978). The histopathological spectrum of nasopharyngeal carcinoma. In: G. de The & Ito, Y. (eds.). *NPC: Etiology and Control*. IARC Sci. Publ. No. 20 Lyon, France pp. 41-50.
- Wolf, H., zur-Hausen, H. & Becker, V. (1973). Epstein-Barr viral genomes in epithelial nasopharyngeal carcinoma cells. *Nature* **244**: 245-247.
- Woo, J.K.S. & Waldron, J. (1991). Diagnosis. In: C.A. van Hasselt & Gibb, A.G. (eds.). *Nasopharyngeal Carcinoma*. The Chinese University Press, Hong Kong pp. 93-104.
- Xu, J., Ahmad, A., Blagdon, M., D'Addario, M., Jones, J.F., Dolcetti, R., Vaccher, E., Prasad, U. & Menezes, J. (1998). The Epstein-Barr virus (EBV) major envelope glycoprotein gp 350/220 specific antibody reactivities in the sera of patients with different EBV-associated diseases. *Int. J. Cancer* **79**: 481-486.
- Yates, J.L. & Guan, N. (1991). Epstein-Barr virus derived plasmids replicate only once per cell cycle and not amplified after entry into cells. *J. Virol.* **65**: 483-488.

- Yates, J., Warren, N., Reisman, D. & Sugden, B. (1984). A cis-acting element from the Epstein-Barr viral genome that permits stable replication of recombinant plasmids in latently infected cells. *Proc. Natl. Acad. Sci. USA* **81**: 3806-3810.
- Yew, D.T.W. (1991). The nasopharynx and related structures. In: C.A. van Hasselt & Gibb, A.G. (eds.). *Nasopharyngeal Carcinoma*. The Chinese University Press, Hong Kong pp. 1-21.
- Yao, Q.Y., Ogan, P., Rowe, M., Wood, M. & Rickinson, A.B. (1989). Epstein-Barr virus infected B cells persist in the circulation of acyclovir treated virus carriers. *Int. J. Cancer* **43**: 67-71.
- Yao, Q.Y., Rowe, M., Martin, B., Young, L.S. & Rickinson, A.B. (1991). The Epstein-Barr virus carrier state: a dominance of a single growth-transforming isolate in the blood and in the oropharynx of healthy virus carriers. *J. Gen. Virol.* **72**: 1579-1590.
- Young, L.S., Dawson, C.W. & Clark, D. (1988). Epstein-Barr virus gene expression in nasopharyngeal carcinoma. *J. Gen. Virol.* **69**: 1051-1065.
- Yu, M.C., Mo, C.C., Chong, W.X., Yeh, F.S. & Henderson, B.E. (1988). Preserved foods and nasopharyngeal carcinoma: a case-control study in Guangxi, China. *Cancer Res.* **48**: 1954-1959.
- Yu, M.C., Huang, T.B. & Henderson, B.E. (1989). Diet and nasopharyngeal carcinoma: a case-control study in Guanzhou, China. *Int. J. Cancer* **43**: 1077-1082.
- Yu, M.C., Garabrant, D.H., Huang, T.B. & Henderson, B.E. (1990). Occupational and other non-dietary risk factors for nasopharyngeal carcinoma in Guangzhou, China. *Int. J. Cancer* **45**: 1033-1039.
- Yuan, Y.B., Gao, Y.T., Ross, R.K. & Yu, M.C. (2000). Non-dietary risk factors for nasopharyngeal carcinoma in Shanghai, China. *Int. J. Cancer* **85**: 364-369.
- Zeng, Y., Zhong, L.G., Li, H.Y., Jan, M.G., Zhang, Q., Wu, Y.C., Wang, Y.S. & Su, G.R. (1982). Serological mass survey for early detection of nasopharyngeal carcinoma in Wuzhou City, China. *Int. J. Cancer* **29**: 139-141.
- Zeng, Y., Gong, C.H., Jan, M.G., Fun, Z., Zhong, L.G. & Li, H.Y. (1983a). Detection of Epstein-Barr virus IgA/VCA antibody for diagnosis of nasopharyngeal carcinoma by immunoautoradiography. *Int. J. Cancer* **31**: 599-601.
- Zeng, Y., Zhong, J.M., Li, L.Y., Wang, P.Z., Tang, H., Ma, Y.R., Zhu, T.S., Pan, W.J., Liu, Y.X., Wei, J.N., Chen, J.Y., Mo, Y.K., Li, E.J. & Tan, B.F. (1983b). Follow-up studies on Epstein-Barr virus IgA/VCA antibody-positive persons in Zangwu Country, China. *Intervirology* **20**: 190-194.

- Zhang, X.M., Liu, G. & Sun, M.J. (2000). Epitopes of human brain acetylcholinesterase. *Brain Res.* **868**: 157-164.
- Zimber, U., Adldinger, H.K., Lenoir, G.M., Vuillaume, M., Knebel-Doeberitz, M.V., Laux, G., Desranges, C., Witman, P., Freese, U.K., Schneider, U. & Bornkamm, G.W. (1986). Geographical prevalence of two Epstein-Barr virus types. *Virology* **154**: 56-66.
- zur Hausen, H., Schulte-Holthausen, H., Klein, G., Henle, G., Clifford, P. & Santesson, L. (1970). Epstein-Barr virus DNA in biopsies of Burkitt tumours and anaplastic carcinomas of the nasopharynx. *Nature* **228**: 1056-1057.
- zur Hausen, H., O'Neil, F.J. & Freese, V.K. (1978). Persisting oncogenic herpesvirus induced by the tumour promoter TPA. *Nature* **272**: 373-375.