

●研究代表者の研究歴等

・過去に所属した研究機関の履歴

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| 1. 1987年10月1日～現在 | 信州大学医学部 |
| 2. 1999年2月22日～1999年3月15日 | Roche診断薬ペソツベルグ研究所 |
| 3. 1995年10月1日～1996年3月31日 | 米国国立衛生研究所 (NIH) |
| 4. 1982年7月1日～1984年12月31日 | 自治医科大学予防生態 |
| 5. 1978年4月1日～1982年6月30日 | 信州大学大学院医学研究科 |

・主な共同研究者(又は指導を受けた研究者)

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| 1. 清澤研道教授 | (信州大学医学部) |
| 2. Dr. Georg Hess | (Roche診断薬ペソツベルグ研究所) |
| 3. Dr. Harvey J Alter | (米国国立衛生研究所) |
| 4. 真弓 忠教授 | (自治医科大学予防生態) |
| 5. 古田精市教授 | (信州大学大学院医学研究科) |

・主な研究課題

1. ウイルス性肝炎における最新の治療法の標準化を目指す研究班 (厚生労働省科学研究費補助金、分担、平成22年度～平成24年度)
2. 肝硬変を含めたウイルス性肝疾患の治療の標準化に関する研究 (厚生労働省科学研究費補助金、分担、平成19年度～平成21年度)
3. B型肝炎ウイルスの抗ウイルス療法における血中RNA遺伝子量測定の意義 (基盤研究C、平成19年度～21年度)
4. リツキシマブ＋ステロイド併用悪性リンパ腫治療中のB型肝炎ウイルス再活性化への対策に関する研究 (厚生労働省科学研究費補助金、分担、平成20年度～平成23年度)
5. L3分画および血流中癌細胞テロメラーゼを指標とした肝癌細胞のサベーランスの有用性に関する研究 (厚生労働省科学研究費補助金、分担、平成17年度～平成19年度)
6. B型及びC型肝炎ウイルスの新たな感染予防法の確立のための感染病態解明に関する研究 (厚生労働省科学研究費補助金、分担、平成16年度～平成18年度)
7. 非A-E型肝炎の原因ウイルス同定 (基礎研究C2、代表、平成13年度～平成15年度)
8. 肝がんに対する肝移植の有効性とその適応基準の確立に関する研究 (厚生労働省科学研究費補助金、分担、平成13年度～平成15年度)
9. C型およびG型肝炎ウイルスの肝組織内局在と病態 (基盤研究C2、代表、平成9年度～平成11年度)
10. HBs145変異抗原測定系の開発と臨床応用 (ウイルス肝炎財団、日本人研究者の海外派遣、平成10年度)
11. Gene Cutterを用いたC型肝炎ウイルス感染症の遺伝子治療 (基盤研究C、代表、平成6年度～平成8年度)
12. 新しくクローニングされたG型肝炎ウイルスの研究 (ウイルス肝炎財団、日本人研究者の海外

派遣、平成 7 年度)

・これまでの研究実績

《特許権等知的財産権》

1. 特願 2003-83283 : HBV-RNA を含む HBV 粒子 (2003/3/25)
2. 特願 2004-558464 : B 型肝炎ウイルスの薬物抵抗性を識別する方法 (2003/12/10)
3. 特願平 8-167497:C 型慢性肝炎の治療効果を事前に予測するためのキット (1996/6/27)
4. 特願平 6-71701: 競合 PCR 法による核酸の簡易定量法 (1994/3/15)

《政策提言》

1. B型慢性肝炎の治療ガイドライン (2008～2011年)
2. C型慢性肝炎の治療ガイドライン (2008～2011年)
3. ウィルス性肝硬変に対する包括的治療のガイドライン (2008～2010年)
4. 免疫抑制・化学療法により発症するB型肝炎の診療ガイドライン (2009年)
5. 肝疾患における肝炎ウイルスマーカーの選択基準 (4版、2006年)
6. 肝機能検査法の選択基準 (7版、2006年)

《発表論文》

1. **Matsumoto A, Tanaka E, Suzuki Y, Kobayashi M, Tanaka Y, Shinkai N, Hige S, Yatsuhashi H, Nagaoka S, Chayama K, Tsuge M, Yokosuka O, Imazeki F, Nishiguchi S, Saito M, Fujiwara K, Torii N, Hiramatsu N, Karino Y, Kumada H.** Combination of hepatitis B viral antigens and DNA for prediction of relapse after discontinuation of nucleos(t)ide analogues in patients with chronic hepatitis B. *Hepatol Res* (in press).
2. **Tanaka E, Urata Y.** Risk of hepatitis B reactivation in patients treated with tumor necrosis factor alpha inhibitors. *Hepatol Res* (in press).
3. Yoneda S, Umemura T, Joshita S, Ichijo T, Matsumoto A, Yoshizawa K, Katsuyama Y, Ota M, Tanaka E. Serum chemokine levels are associated with the outcome of pegylated interferon and ribavirin therapy in patients with chronic hepatitis C. *Hepatol Res* 2011;41(6):587-593.
4. Umemura T, Joshita S, Yoneda S, Katsuyama Y, Ichijo T, Matsumoto A, Yoshizawa K, Ota M, Tanaka E. Serum interleukin (IL)-10 and IL-12 levels and IL28B gene polymorphisms: pretreatment prediction of treatment failure in chronic hepatitis C. *Antivir Ther* 2011;16(7):1073-1080.
5. Tanaka Y, Kuroasaki M, Nishida N, Sugiyama M, Matsuura K, Sakamoto N, Enomoto N, Yatsuhashi H, Nishiguchi S, Hino K, Hige S, Itoh Y, Tanaka E, Mochida S, Honda M, Hiasa Y, Koike A, Sugauchi F, Kaneko S, Izumi N, Tokunaga K, Mizokami M. Genome-wide association study identified ITPA/DDRGK1 variants reflecting thrombocytopenia in pegylated interferon and ribavirin therapy for chronic hepatitis C. *Hum Mol Genet* 2011;20(17):3507-3516.

6. Tanaka N, Horiuchi A, Yokoyama T, Kaneko G, Horigome N, Yamaura T, Nagaya T, Komatsu M, Sano K, Miyagawa S, Aoyama T, Tanaka E. Clinical characteristics of de novo nonalcoholic fatty liver disease following pancreaticoduodenectomy. *J Gastroenterol* 2011;46(6):758-768.
7. Sakamoto N, Nakagawa M, Tanaka Y, Sekine-Osajima Y, Ueyama M, Kurosaki M, Nishida N, Tamori A, Yuki NS, Itsui Y, Azuma S, Kakinuma S, Hige S, Itoh Y, Tanaka E, Hiasa Y, Izumi N, Tokunaga K, Mizokami M, Watanabe M. Association of IL28B variants with response to pegylated-interferon alpha plus ribavirin combination therapy reveals intersubgenotypic differences between genotypes 2a and 2b. *J Med Virol* 2011;83(5):871-878.
8. Nozawa Y, Joshita S, Fukushima M, Sugiyama Y, Ichikawa Y, Kimura T, Morita S, Kamijo A, Umemura T, Ichijo T, Matsumoto A, Yoshizawa K, Tanaka E. A Case of Pyogenic Liver Abscess Infected with *Fusobacterium necrophorum* Depicted by Microscopy and Confirmed by Tissue Culture. *Intern Med* 2011;50(17):1815-1819.
9. Kodama R, Watanabe T, Maruyama M, Ito T, Yoneda S, Muraki T, Hamano H, Arakura N, Tanaka E. Annular pancreas with high confluence of pancreaticobiliary ducts in an adult. *Nihon Shokakibyo Gakkai Zasshi* 2011;108(9):1589-1595.
10. Kamijo A, Yoshizawa K, Joshita S, Yoneda S, Umemura T, Ichijo T, Matsumoto A, Ota M, Tanaka E. Cytokine profiles affecting the pathogenesis of autoimmune hepatitis in Japanese patients. *Hepatol Res* 2011;41(4):350-357.
11. Ichikawa-Yamada Y, Joshita S, Tsukahara Y, Kimura T, Morita S, Kamijo A, Umemura T, Ichijo T, Matsumoto A, Yoshizawa K, Tanaka E. Early detection of interstitial pneumonia by monitoring KL-6 in a chronic hepatitis C patient undergoing pegylated interferon and ribavirin therapy. *Hepatol Res* 2011;41(9):904-909.
12. Akamatsu T, Ichikawa S, Okudaira S, Yokosawa S, Iwaya Y, Suga T, Ota H, Tanaka E. Introduction of an examination and treatment for *Helicobacter pylori* infection in high school health screening. *J Gastroenterol* 2011.
13. Yoneda S, Umemura T, Katsuyama Y, Kamijo A, Joshita S, Komatsu M, Ichijo T, Matsumoto A, Yoshizawa K, Ota M, Tanaka E. Association of serum cytokine levels with treatment response to pegylated interferon and ribavirin therapy in genotype 1 chronic hepatitis C patients. *J Infect Dis* 203(8): 1087-1095, 2011.
14. ***Yokosuka O, Kurosaki M, Imazeki F, Arase Y, Tanaka Y, Chayama K, Tanaka E, Kumada H, Izumi N, Mizokami M, Kudo M. Management of hepatitis B: Consensus of the Japan Society of Hepatology 2009. Hepatol Res 41(1) 1-21, 2011.***
15. Umemura T, Zen Y, Hamano H, Joshita S, Ichijo T, Yoshizawa K, Kiyosawa K, Ota M, Kawa S, Nakanuma Y, Tanaka E. Clinical significance of immunoglobulin G4-associated autoimmune hepatitis. *J Gastroenterol* 46 Suppl 1; 48-55, 2011.
16. **田中榮司. 透析患者における B 型肝炎ウイルスマーカー測定の意義. 日本透析医学会雑誌 2011;26:55-61.**

17. Kimura T, Umemura T, Ichijo T, Yamamura N, Tanaka E. Severe hepatic encephalopathy and decrease in enhancement of hepatocellular carcinoma treated with sorafenib. International Journal of Case Reports and Images 2010;1(4):16-18.
18. Joshita S, Yoshizawa K, Sano K, Kobayashi S, Sekiguchi T, Morita S, Kamijo A, Komatsu M, Umemura T, Ichijo T, Matsumoto A, Tanaka E. A patient with advanced hepatocellular carcinoma treated with sorafenib tosylate showed massive tumor lysis with avoidance of tumor lysis syndrome. Intern Med 2010;49(11):991-994.
19. Joshita S, Nakazawa K, Koike S, Kamijo A, Matsubayashi K, Miyabayashi H, Furuta K, Kitano K, Yoshizawa K, Tanaka E. A case of granulocyte-colony stimulating factor-producing hepatocellular carcinoma confirmed by immunohistochemistry. J Korean Med Sci 2010;25(3):476-480.
20. Akamatsu T, Nagaya T, Ichikawa S, Sudo T, Takeda R, Takenaka K, Kodama R, Ito T, Arakura N, Tanaka E. Small bowel tissue concentration of rebamipide: study of two dosages in healthy subjects. J Clin Biochem Nutr 2010;47(3):256-260.
21. Akamatsu T, Kaneko Y, Ota H, Miyabayashi H, Arakura N, Tanaka E. Usefulness of double balloon enteroscopy and video capsule endoscopy for the diagnosis and management of primary follicular lymphoma of the gastrointestinal tract in its early stages. Dig Endosc 2010;22(1):33-38.
22. Hatta T, Fujinaga Y, Kadoya M, Ueda H, Murayama H, Kurozumi M, Ueda K, Komatsu M, Nagaya T, Joshita S, Kodama R, Tanaka E, Uehara T, Sano K, Tanaka N. Accurate and simple method for quantification of hepatic fat content using magnetic resonance imaging: a prospective study in biopsy-proven nonalcoholic fatty liver disease. J Gastroenterol 45 1263-1271, 2010.
23. **Matsumoto A, Maki N, Yoshizawa K, Umemura T, Joshita S, Tanaka E. Comparison of hepatitis B virus DNA, RNA, and core related antigen as predictors of lamivudine resistance in patients with chronic hepatitis B. Shinshu Medical Journal 58(4):153-62, 2010.**
24. **Kumada H, Okanoue T, Onji M, Moriwaki H, Izumi N, Tanaka E, Cyayama K, Sakisaka S, Takehara T, Oketani M, Suzuki F, Toyota J, Nomura H, Yoshioka K, Seike M, Yotsuyanagi H, Ueno Y. Guidelines for the treatment of chronic hepatitis and cirrhosis induced by hepatitis B virus infection for the fiscal year 2008 in Japan. Hepatol Res 40: 1-7, 2010.**
25. Kumada H, Okanoue T, Onji M, Moriwaki H, Izumi N, Tanaka E, Cyayama K, Sakisaka S, Takehara T, Oketani M, Suzuki F, Toyota J, Nomura H, Yoshioka K, Seike M, Yotsuyanagi H, Ueno Y. Guidelines for the treatment of chronic hepatitis and cirrhosis induced by hepatitis C virus infection for the fiscal year 2008 in Japan. Hepatol Res. 40: 8-13, 2010.
26. Tanaka N, Zhang X, Sugiyama E, Kono H, Horiuchi A, Nakajima T, Kanbe H, Tanaka E, Gonzalez FJ, Aoyama T. Eicosapentaenoic acid improves hepatic steatosis independent of

- PPARalpha activation through inhibition of SREBP-1 maturation in mice. *Biochem Pharmacol* 80(10):1601-12, 2010.
27. Tamura Y, Igarashi M, Suda T, Wakai T, Shirai Y, Umemura T, Tanaka E, Kakizaki S, Takagi H, Hiasa Y, Onji M, Aoyagi Y. Fucosylated fraction of alpha-fetoprotein as a predictor of prognosis in patients with hepatocellular carcinoma after curative treatment. *Dig Dis Sci* 55(7):2095-101, 2010.
 28. Nagaya T, Tanaka N, Suzuki T, Sano K, Horiuchi A, Komatsu M, Nakajima T, Nishizawa T, Joshita S, Umemura T, Ichijo T, Matsumoto A, Yoshizawa K, Nakayama J, Tanaka E, Aoyama T. Down-regulation of SREBP-1c is associated with the development of burned-out NASH. *J Hepatol* 53(4):724-31, 2010.
 29. Tsuruta G, Tanaka N, Hongo M, Komatsu M, Horiuchi A, Hamamoto K, Iguchi C, Nakayama Y, Umemura T, Ichijo T, Matsumoto A, Yoshizawa K, Aoyama T, Tanaka E. Nonalcoholic fatty liver disease in Japanese junior high school students: its prevalence and relationship to lifestyle habits. *J Gastroenterol* 45(6):666-72, 2010.
 30. Tsutsui M, Tanaka N, Kawakubo M, Sheena Y, Horiuchi A, Komatsu M, Nagaya T, Joshita S, Umemura T, Ichijo T, Matsumoto A, Yoshizawa K, Aoyama T, Tanaka E, Sano K. Serum fragmented cytokeratin 18 levels reflect the histologic activity score of nonalcoholic fatty liver disease more accurately than serum alanine aminotransferase levels. *J Clin Gastroenterol* 44(6):440-7, 2010.
 31. Uehara T, Hamano H, Kawa S, Sano K, Oki K, Kobayashi Y, Nagaya T, Akamatsu T, Kurozumi M, Fujinaga Y, Tanaka E, Honda T, Ota H. Chronic gastritis in the setting of autoimmune pancreatitis. *Am J Surg Pathol* 34(9):1241-9, 2010.
 32. Joshita S, Umemura T, Yoshizawa K, Katsuyama Y, Tanaka E, Ota M. A2BP1 as a novel susceptible gene for primary biliary cirrhosis in Japanese patients. *Hum Immunol* 71(5):520-4, 2010.
 33. Joshita S, Umemura T, Yoshizawa K, Katsuyama Y, Tanaka E, Nakamura M, Ishibashi H, Ota M. Association analysis of cytotoxic T-lymphocyte antigen 4 gene polymorphisms with primary biliary cirrhosis in Japanese patients. *J Hepatol* 53(3):537-41, 2010.
 34. **田中榮司. B型肝炎再活性化の病態と対策. 日消誌 107(9):1417-25, 2010.**
 35. Kusakabe A, Tanaka Y, Mochida S, Nakayama N, Inoue K, Sata M, Isoda N, Kang J H, Sumino Y, Yatsuhashi H, Takikawa Y, Kaneko S, Yamada G, Karino Y, Tanaka E, Kato J, Sakaida I, Izumi N, Sugauchi F, Nojiri S, Joh T, Miyakawa Y, Mizokami M. Case-control study for the identification of virological factors associated with fulminant hepatitis B. *Hepatol Res* 39(7): 648-656, 2009.
 36. Matsumoto A, Tanaka E. Pretreatment prediction of virological response to peginterferon plus ribavirin therapy in patients with chronic hepatitis C, using viral and host factors: some concerns (reply). *Hepatology* 49(6): 2125; author reply 2125-2126, 2009.
 37. Matsuura K, Tanaka Y, Hige S, Yamada G, Murawaki Y, Komatsu M, Kuramitsu T, Kawata S,

- Tanaka E, Izumi N, Okuse C, Kakumu S, Okanoue T, Hino K, Hiasa Y, Sata M, Maeshiro T, Sugauchi F, Nojiri S, Joh T, Miyakawa Y, Mizokami M. Distribution of hepatitis B virus genotypes among patients with chronic infection in Japan shifting toward an increase of genotype A. *J Clin Microbiol* 47(5): 1476-1483, 2009.
38. Okanoue T, Itoh Y, Hashimoto H, Yasui K, Minami M, Takehara T, Tanaka E, Onji M, Toyota J, Chayama K, Yoshioka K, Izumi N, Akuta N., Kumada H. Predictive values of amino acid sequences of the core and NS5A regions in antiviral therapy for hepatitis C: a Japanese multi-center study. *J Gastroenterol* 44(9): 952-963, 2009.
39. Tanaka N, Horiuchi A, Yamaura T, Komatsu M, Yokoyama T, Okaniwa S, Nagaya T, Yoshizawa K, Kiyosawa K, Aoyama T, Tanaka E. Efficacy and safety of addition of minor bloodletting (petit phlebotomy) in hepatitis C virus-infected patients receiving regular glycyrrhizin injections. *J Gastroenterol* 44(6): 577-582, 2009.
40. Tanaka Y, Nishida N, Sugiyama M, Kuroski M, Matsuura K, Sakamoto N, Nakagawa M, Korenaga M, Hino K, Hige S, Ito Y, Mita E, Tanaka E, Mochida S, Murawaki Y, Honda M, Sakai A, Hiasa Y, Nishiguchi S, Koike A, Sakaida I, Imamura M, Ito K, Yano K, Masaki N, Sugauchi F, Izumi N, Tokunaga K, Mizokami M. Genome-wide association of IL28B with response to pegylated interferon-alpha and ribavirin therapy for chronic hepatitis C. *Nat Genet* 41(10): 1105-1109, 2009.
41. Umemura T, Katsuyama Y, Hamano H, Kitahara K, Takayama M, Arakura N, Kawa S, Tanaka E, Ota M. Association analysis of Toll-like receptor 4 polymorphisms with autoimmune pancreatitis. *Hum Immunol* 70(9):742-6, 2009.
42. Umemura T, Ichijo T, Yoshizawa K, Tanaka E, Kiyosawa K. Epidemiology of hepatocellular carcinoma in Japan. *J Gastroenterol* 44 (Suppl 19): 102-107, 2009.
43. Fujiwara K, Kojima H, Yonemitsu Y, Yasui S, Imazeki F, Miki M, Suzuki K, Sakaida I, Okita K, Tanaka E, Omata M, Yokosuka O. Phylogenetic analysis of hepatitis A virus in sera from patients with hepatitis A of various severities. *Liver Int* 29(6): 838-845, 2009.
44. Okiyama W, Tanaka N, Nakajima T, Tanaka E, Kiyosawa K, Gonzalez FJ, Aoyama T. Polyenephosphatidylcholine prevents alcoholic liver disease in PPARalpha-null mice through attenuation of increases in oxidative stress. *J Hepatol* 50(6): 1236-1246, 2009.
45. Okanoue T, Itoh Y, Minami M, Hashimoto H, Yasui K, Yotsuyanagi H, Takehara T, Kumada T, Tanaka E, Nishiguchi S, Izumi N, Sata M, Onji M, Yamada G, Okita K, Kumada H. Guidelines for the antiviral therapy of hepatitis C virus carriers with normal serum aminotransferase based on platelet counts. *Hepatol Res* 38(1): 27-36, 2008.
46. Shirakawa H, Matsumoto A, Joshita S, Komatsu M, Tanaka N, Umemura T, Ichijo T, Yoshizawa K, Kiyosawa K, Tanaka E. Pretreatment prediction of virological response to peginterferon plus ribavirin therapy in chronic hepatitis C patients using viral and host factors. *Hepatology* 48(6): 1753-1760, 2008.
47. Tanaka E, Matsumoto A, Yoshizawa K, Maki N. Hepatitis B core-related antigen assay is

- useful for monitoring the antiviral effects of nucleoside analogue therapy. *Intervirology* 51 Suppl 1: 3-6, 2008.
48. Tanaka E, Umemura T. History and prevention of de novo hepatitis B virus-related hepatitis in Japan and the world. *Clinical Journal of Gastroenterology* 1(3): 83-86, 2008.
49. Tanaka N, Nagaya T, Komatsu M, Horiuchi A, Tsuruta G, Shirakawa H, Umemura T, Ichijo T, Matsumoto A, Yoshizawa K, Aoyama T, Kiyosawa K, Tanaka E. Insulin resistance and hepatitis C virus: a case-control study of non-obese, non-alcoholic and non-steatotic hepatitis virus carriers with persistently normal serum aminotransferase. *Liver Int* 28(8): 1104-1111, 2008.
50. Umemura T, Tanaka E, Kiyosawa K, Kumada H. Mortality secondary to fulminant hepatic failure in patients with prior resolution of hepatitis B virus infection in Japan. *Clin Infect Dis* 47(5): e52-56, 2008.
51. Tanaka N, Nagaya T, Komatsu M, Horiuchi A, Tsuruta G, Shirakawa H, Umemura T, Ichijo T, Matsumoto A, Yoshizawa K, Aoyama T, Kiyosawa K, Tanaka E. Insulin resistance and hepatitis C virus: a case-control study of non-obese, non-alcoholic and non-steatotic hepatitis virus carriers with persistently normal serum aminotransferase. *Liver Int* 28(8): 1104-1111, 2008.
52. Tanaka N, Sano K, Horiuchi A, Tanaka E, Kiyosawa K, Aoyama T. Highly purified eicosapentaenoic acid treatment improves nonalcoholic steatohepatitis. *J Clin Gastroenterol* 42(4): 413-418, 2008.
53. Umemura T, Ota M, Yoshizawa K, Katsuyama Y, Ichijo T, Tanaka E, Kiyosawa K. Association of cytotoxic T-lymphocyte antigen 4 gene polymorphisms with type 1 autoimmune hepatitis in Japanese. *Hepatol Res* 38(7): 689-695, 2008.
54. Umemura T, Muto H, Tanaka E, Matsumoto A, Ichijo T, Yoshizawa K, Akamatsu T, Kiyosawa K, and the Nagano Interferon Treatment Research Group. Anti-Helicobacter seropositivity: influence on severity and treatment response in patients with chronic hepatitis C. *J Viral Hepatitis* 14: 48-54, 2007
55. Yokosawa S, Yoshizawa K, Ota M, Katsuyama Y, Kawa S, Ichijo T, Umemura T, Tanaka E, Kiyosawa K. A genomewide DNA microsatellite association study of Japanese patients with autoimmune hepatitis type 1. *Hepatology* 45: 384-390, 2007
56. Umemura T, Ota M, Yoshizawa K, Katsuyama Y, Ichijo T, Tanaka E, Kawa S, Kiyosawa K. Lack of association between FCRL3 and FcγRII polymorphisms in Japanese type 1 autoimmune hepatitis. *Clin Immunol* 122: 338-342, 2007
57. Tanaka N, Horiuchi A, Yamaura T, Komatsu M, Tanaka E, Kiyosawa K. Efficacy and safety of 6-month iron reduction therapy in patients with hepatitis C virus-related cirrhosis: a pilot study. *J Gastroenterol* 42: 49-55, 2007
58. Matsumoto A, Tanaka E, Minami M, TOkanoue T, Yatsuhashi H, Nagaoka S, Suzuki F, Kobayashi M, Chayama K, Imamura M, Yotsuyanagi H, Nakaoka S, Maki N, Kawata S,

- Kumada H, Iino S, Kiyosawa K: Low serum level of hepatitis B core-related antigen indicates unlikely reactivation of hepatitis after cessation of lamivudine therapy. *Hepatol Res* 37: 661-666, 2007
59. Fujiwara K, Yokosuka O, Imazeki F, Miki M, Suzuki K, Okita K, Tanaka E, Omat M: Genetic analysis of hepatitis A virus protein 2C in sera from patients with fulminant and self-limited hepatitis A. *Hepato-Gastroenterology* 54: 871-877, 2007
60. Fujiwara K, Yokosuka O, Imazeki F, Miki M, Suzuki K, Okita K, Tanaka E, Omat M: Analysis of hepatitis A virus protein 2B in sera of hepatitis A of various severities. *J Gastroenterol* 42: 560-6, 2007
61. Tanaka E, Matsumoto A, Suzuki F, Kobayashi M, Mizokami M, Tanaka Y, Okanoue T, Minami M, Chayama K, Immura M, Yatsuhashi H, Nagaoka S, Yotsuyanagi H, Kawata S, Kimura T, Maki N, Iino S, Kiyosawa K, and HBV Core-Related Antigen Study Group. Measurement of hepatitis B virus core-related antigen is valuable for identifying patients who are at low risk of lamivudine resistance. *Liver Int* 26:90-96, 2006
62. Tanaka N, Ichijo T, Okiyama W, Mutou H, Misawa N, Matsumoto A, Yoshizawa K, Tanaka E, Kiyosawa K. Laparoscopic findings in patients with nonalcoholic steatohepatitis. *Liver Int* 2:32-38, 2006
63. Misawa N, Matsumoto A, Tanaka E, Rokuhara A, Yoshizawa K, Umemura T, Maki N, Kimura T, Kiyosawa K. Patients with and without loss of hepatitis B virus DNA after hepatitis B e antigen seroconversion have different virological characteristics. *J Med Virol* 78:68-73, 2006
64. Ogata K, Ide T, Kumashiro R, Kumada H, Yotsuyanagi H, Okita K, Akahane Y, Kaneko S, Tsubouchi H, Tanaka E, Moriwaki H, Nishiguchi S, Kakumu S, Mizokami M, Iino S, Sata M. Timing of interferon therapy and sources of infection in patients with acute hepatitis C. *Hepatology Research* 34:35-40, 2006
65. Tanaka N, Tanaka E, Sheena Y, Komatsu M, Okiyama W, Misawa N, Muto H, Umemura T, Ichijo T, Matsumoto A, Yoshizawa K, Horiuchi A, Kiyosawa K. Useful parameters for distinguishing nonalcoholic steatohepatitis with mild steatosis from cryptogenic chronic hepatitis in the Japanese population. *Liver Int* 26:956-963, 2006
66. Rokuhara A, Matsumoto A, Tanaka E, Umemura T, Yoshizawa K, Kimura T, Maki N, Kiyosawa K. Hepatitis B virus RNA is measurable in serum and can be a new marker for monitoring lamivudine therapy. *J Gastroenterol* 41: 785-790, 2006
67. Ozasa A, Tanaka Y, Orito E, Sugiyama M, Kang JH, Hige S, Kuramitsu T, Suzuki K, Tanaka E, Okada S, Tokita H, Asahina Y, Inoue K, Kakumu S, Okanoue T, Murawaki Y, Hino K, Onji M, Yatsuhashi H, Sakugawa H, Miyakawa Y, Ueda R, Mizokami M. Influence of genotypes and precore mutations on fulminant or chronic outcome of acute hepatitis B virus infection. *Hepatology* 44: 326-334, 2006
68. Yoshizawa K, Ota M, Katsuyama Y, Ichijo T, Matsumoto A, Tanaka E, Kendo K. Genetic analysis of the HLA region of Japanese patients with type 1 autoimmune hepatitis. *J Hepatol*

- 42:578-584, 2005
- 69. Sun XH, Rokuhara A, Tanaka E, Gad A, Mutou H, Matsumoto A, Yoshizawa K, Kiyosawa K. Nucleotide mutations associated with hepatitis B e antigen negativity. *J Med Virol* 76:170-175, 2005
 - 70. Tanaka E, Matsumoto A, Takeda N, Li T-C, Umemura T, Yoshizawa K, Miyakawa Y, Miyamura T, Kiyosawa K. Age-specific Antibody to Hepatitis E Virus Stays Constant during the Past 20 Years in Japan. *J Viral Hepatitis* 12:439-442, 2005
 - 71. Matsumoto A, Tanaka E, Rokuhara A, Kiyosawa K, Kumada H, Omata M, Okita K, Hayashi N, Okanoue T, Iino S, Tanikawa K, and the Inuyama Hepatitis Study Group. Efficacy of lamivudine for preventing hepatocellular carcinoma in chronic hepatitis B: A multicenter retrospective study of 2,795 patients. *Hepatology Research* 32:173-184, 2005
 - 72. Kimura T, Ohno N, Terada N, Rokuhara A, Matsumoto A, Yagi S, Tanaka E, Kiyosawa K, Ohno S, Maki N. Hepatitis B virus DNA-negative Dane particles lack core protein but contain a 22-kDa precore protein without C-terminal arginine-rich domain. *J Biol Chem* 280:21713-21719, 2005
 - 73. Rokuhara A, Sun X, Tanaka E, Kimura T, Matsumoto A, Yao D, Yin L, Wang N, Maki N, Kiyosawa K. Hepatitis B virus core and core-related antigen quantitation in Chinese patients with chronic genotype B and C hepatitis B virus infection. *J Gastroenterol Hepatol* 20: 1726-1730, 2005
 - 74. Yagi S, Mori K, Tanaka E, Matsumoto A, Sunaga F, Kiyosawa K, Yamaguchi K. Identification of novel HCV subgenome replicating persistently in chronic active hepatitis C patients. *J Med Virol* 77:399-413, 2005
 - 75. Gad A, Tanaka E, Matsumoto A, Wahab MA, Serwah AH, Attia F, Ali K, Hassouba H, El-Deeb AE, Ichijo T, Umemura T, Muto H, Yoshizawa K, Kiyosawa K. Assessment of KL-6 as a tumor marker in patients with hepatocellular carcinoma. *World J Gastroenterol* 11(42): 6607-6612, 2005
 - 76. Gad A, Tanaka E, Matsumoto A, Serwah AE, Attia F, Hassan A, Sanny A, Ali K, Abbas A, El-Deeb AE, Sun XH, Umemura T, Ichijo T, Ehara T, Yoshizawa K, Kiyosawa K. Ethnicity affects the diagnostic validity of alpha-fetoprotein in hepatocellular carcinoma. *Asia-Pacific Journal of Clinical Oncology* 1: 64-70, 2005
 - 77. Higashi K, Tsukiyama-Kohara K, Tanaka T, Tanaka E, Kiyosawa K, Kohara M. Characterization of hypervariable region in hepatitis C virus envelope protein during acute and chronic infection. *Arch Virol* 150: 883-898, 2005
 - 78. Muto H, Tanaka E, Matsumoto A, Yoshizawa K, Kiyosawa K, Nagano Interferon Treatment Research Group. Type of human leukocyte antigen and changes in HCV core antigen concentration for predicting efficacy of Interferon- α treatment in patients with chronic hepatitis C: Analysis by a prospective study. *J Gastroenterol* 39: 674-680, 2004
 - 79. Ksahara A, Tanaka H, Okanoue T, Imai Y, Tsubouchi H, Yoshioka K, Kawata S, Tanaka E,

- Hino K, Hayashi K, Tamura S, Itho Y, Kiyosawa K, Kakumu S, Okita K, Hayashi N. Interferon treatment improves survival in chronic hepatitis C patients showing biochemical as well as virological responses by preventing liver-related death. *J Viral Hepatitis* 11:148-156, 2004
80. Kato N, Sugauchi F, Ozasa A, Kato T, Tanaka Y, Sakugawa H, Sata M, Hino K, Onji M, Okanoue T, Tanaka E, Kawata S, Suzuki K, Hige S, Ohno T, Orito E, Ueda R, Mizokami M. Hepatitis B virus genotype G is an extremely rare genotype in Japan. *Hepatol Res* 30:199-203, 2004
81. Imai Y, Kasahara A, Tanaka H, Okanoue T, Hiramatsu N, Tsubouchi H, Yoshioka K, Kawata S, Tanaka E, Hino K, Hayashi K, Tamura S, Itho Y, Sasaki Y, Kiyosawa K, Kakumu S, Okita K, Hayashi N. Interferon therapy for aged patients with chronic hepatitis C: improved survival in patients exhibiting a biochemical response. *J Gastroenterol* 39:1069-1077, 2004
82. Nakajima T, Kamijo Y, Tanaka N, Sugiyama E, Tanaka E, Kiyosawa K, Fukushima Y, Peters JM, Gonzalez FJ, Aoyama T. Peroxisome proliferator-activated receptor α protects against alcohol-induced liver damage. *Hepatology* 40:972-980, 2004
83. Kiyosawa K, Umemura T, Ichijo T, Matsumoto A, Yoshizawa K, Gad A, Tanaka E. Hepatocellular carcinoma: recent trends in Japan. *Gastroenterology* 127:S17-S26, 2004
84. Imamura H, Matsuyama Y, Tanaka E, Ohkubo T, Hasegawa K, Miyagawa S, Sugawara Y, Minagawa M, Takayama T, Kawasaki S, Makuuchi M: Risk factors contributing to early and late phase intrahepatic recurrence of hepatocellular carcinoma after hepatectomy. *J Hepatol* 38: 200-207, 2003
85. Yoshizawa K, Ota M, Saito S, Maruyama A, Yamaura T, Rokuohara A, Orii K, Ichijo T, Matsumoto A, Tanaka E, Kiyosawa K: Long-term follow-up of hepatitis C virus infection: HLA class II loci influences the natural history of the disease. *Tissue Antigens* 61: 159-165, 2003
86. Kobayashi N, Tanaka E, Umemura T, Matsumoto A, Iijima T, Higuchi M, Hora K, Kiyosawa K. Clinical significance of SEN virus infection in patients on maintenance hemodialysis. *Nephrol Dial Transpl* 18: 348-352, 2003
87. Kimura T, Rokuohara A, Matsumoto A, Yagi S, Tanaka E, Kiyosawa K, Maki N. New enzyme immunoassay for detection of hepatitis B virus core antigen (HBcAg) and relation between levels of HBcAg and HBV DNA. *J Clin Microbiol* 41: 1901-1906, 2003
88. Yamaura T, Tanaka E, Matsumoto A, Rokuohara A, Orii K, Yoshizawa K, Miyakawa Y, Kiyosawa K. A case-control study for early prediction of hepatitis B e antigen seroconversion by hepatitis B virus DNA levels and mutations in the precore region and core promoter. *J Med Virol* 70: 545-552, 2003
89. Gad A, Tanaka E, Matsumoto A, el-Hamid Serwah A, Ali K, Makledy F, el-Gohary A, Orii K, Iijima A, Rokuohara A, Yoshizawa K, Nooman Z, Kiyosawa K. Factors predisposing to the occurrence of cryoglobulinemia in two cohorts of Egyptian and Japanese patients with chronic hepatitis C infection: ethnic and genotypic influence. *J Med Virol* 70: 594-599, 2003
90. Rokuohara A, Tanaka E, Matsumoto T, Kimura T, Yamaura T, Orii K, Sun X, Yagi S, Maki N,

- Kiyosawa K. Clinical evaluation of a new enzyme immunoassay for hepatitis B virus core-related antigen: a marker distinct from viral DNA for monitoring lamivudine treatment. *J Viral Hepatitis* 10: 324-330, 2003
91. Malaty HM, Tanaka E, Kumagai T, Ota H, Kiyosawa K, Graham DY, Katsuyama T. Seroepidemiology of helicobacter pylori and hepatitis A virus and the mode of transmission of infection: a 9-year cohort study in rural Japan. *Clin Infect Dis* 37: 1067-1072, 2003
92. Umemura T, Tanaka E, Ostapowicz G, Brown KE, Heringlake S, Tassopoulos NC, Wang RYH, Yeo AE, Shih JWK, Orii K, Young NS, Hatzakis A, Manns MP, Lee WM, Kiyosawa K, Alter HJ. Investigation of SEN virus infection in patients with cryptogenic acute liver failure, hepatitis-associated aplastic anemia, or acute and chronic non-A-E hepatitis. *J Infect Dis* 188: 1545-1552, 2003
93. Gad A, Tanaka E, Orii K, Rokuahara A, Nooman Z, Serwah AEH, El-Sherif A, El-Essawy M, Yoshizawa K, Kiyosawa K. Clinical significance of TT virus infection in maintenance hemodialysis patients of an endemic area for hepatitis C infection. *Hepatol Res* 22: 13-19, 2002
94. Kimura T, Rokuahara A, Sakamoto Y, Yagi S, Tanaka E, Kiyosawa K, Maki N. Sensitive enzyme immunoassay for hepatitis B virus core-related antigens and their correlation to virus load. *J Clin Microbiol* 40: 439-445, 2002
95. Kakegawa T, Ise H, Sugihara N, Nikaido T, Negishi N, Akaike T, Tanaka E. Soluble asialoglycoprotein receptors reflect the apoptosis of hepatocytes. *Cell Transplantation* 11: 407-415, 2002
96. Umemura T, Alter HJ, Tanaka E, Orii K, Yeo AET, Shih JWK, Matsumoto A, Yoshizawa K, Kiyosawa K. SEN virus: response to interferon alfa and influence on the severity and treatment response of coexistent hepatitis C. *Hepatology* 35: 953-959, 2002
97. Yoshizawa K, Cioca DP, Kawa S, Tanaka E, Kiyosawa K.: Peroxisome proliferator-activated receptor γ ligand troglitazone induces cell cycle arrest and apoptosis of hepatocellular carcinoma cell lines. *Cancer* 95: 2243-2251, 2002
98. Higuchi M, Tanaka E, Kiyosawa K: Epidemiology and clinical aspects on hepatitis C. *Jpn J Infect Dis* 55: 69-77, 2002
99. Kiyosawa K, Tanaka E: Characteristics of hepatocellular carcinoma in Japan. *Oncology* 62 (suppl 1): 5-7, 2002
100. Kiyosawa K, Tanaka E: Hepatitis C virus in the etiology of hepatocellular carcinoma. In: Tabor E (ed), *Virus and Liver Cancer*. pp31-42, ELSEVIER, New York, 2002
101. Kiyosawa K, Tanaka E: Hepatocellular carcinoma and hepatitis C. In: Sarin SK, Okuda K (eds), *Hepatitis B and C carrier to cancer*. pp315-329, ELSEVIER INDIA, Harcourt, 2002
102. Aoyagi K, Iida K, Ohue C, Matsunaga Y, Tanaka E, Kiyosawa K, Yagi S: Performance of a conventional enzyme immunoassay for hepatitis C virus core antigen in the early phases of hepatitis C infection. *Clin Lab* 47: 119-127, 2001

103. Gad A, Tanaka E, Orii K, Rokuhara A, Nooman Z, Serwah AH, Shoair M, Yoshizawa K, Kiyisawa K: Relationship between hepatitis C virus infection and schistosomal liver disease: not simply an additive effect. *J Gastroenterol* 36: 753-758, 2001
104. Hosaka S, Kawa S, Aoki Y, Tanaka E, Yoshizawa K, Karasawa Y, Hosaka N, Kiyosawa K: Hepatocarcinogenesis inhibition by caffeine in ACI rats treated with 2-acetylaminofluorene. *Food Chem Toxicol* 39: 557-561, 2001
105. Orito E, Ichida T, Sakugawa H, Sata M, Horike N, Hino K, Okita K, Okanoue T, Iino S, Tanaka E, Suzuki K, Watanabe H, Hige S, Mizokami M: Geographic distribution of hepatitis B virus (HBV) genotype in patients with chronic HBV infection in Japan. *Hepatology* 34: 590-594, 2001
106. Orito E, Mizokami M, Sakugawa H, Kojiro M, Ishikawa K, Ichida T, Okanoue T, Yotsuyanagi H, Iino S, Japan HBV genotype research group: A case-control study for clinical and molecular biological differences between hepatitis B viruses of genotype B and C. *Hepatology* 33: 218-223, 2001
107. Tanaka E, Takeda N, Li TC, Orii K, Ichijo T, Matsumoto A, Yoshizawa K, Iijima T, Takayama T, Miyamura T, Kiyosawa K: Seroepidemiological study of hepatitis E virus infection in Japan using a newly developed antibody assay. *J Gastroenterol* 36: 317-321, 2001
108. Umemura T, Alter HJ, Tanaka E, Yeo AE, Shih JW, Orii K, Matsumoto A, Yoshizawa K, Kiyosawa K: Association between SEN virus infection and hepatitis C in Japan. *J Infect Dis* 184: 1246-1251, 2001
109. Kiyosawa K, Tanaka E: Strategy for lamivudine-resistant YMDD mutant-associated chronic hepatitis B. *J Gastroenterol* 36: 139-141, 2001
110. Iijima A, Tanaka E, Kobayashi M, Yagi S, Mizokami M, Kiyosawa K: Relationship between histological prognosis of chronic hepatitis C and amount of hepatitis C virus core protein in serum. *J Gastroen Hepatol* 15: 311-319, 2000
111. Gad A, Tanaka E, Orii K, Todoriki K, Serwah A EH, El-Sherif A, Nooman Z, Kiyosawa K: Clinical significance of TT virus infection in patients with chronic liver disease and volunteer blood donors in Egypt. *J Med Virol* 60: 177-181, 2000
112. Malaty HM, Kumagai T, Tanaka E, Ota H, Kiyosawa K, Graham DY, Katsuyama T: Evidence from nine-year birth cohort study in Japan of transmission pathways of Helicobacter pylori infection. *J Clin Microbiol* 38: 1971-1973, 2000
113. Inada H, Yoshizawa Y, Ota M, Katsuyama Y, Ichijo T, Umemura T, Tanaka E, Kiyosawa K: T cell repertoire in the liver of patients with primary biliary cirrhosis. *Hum Immunol* 61: 675-683, 2000
114. Tanaka E, Ohue C, Aoyagi K, Yamaguchi K, Yagi S, Kiyosawa K, Alter HJ: Evaluation of a new enzyme immunoassay for hepatitis C virus (HCV) core antigen with clinical sensitivity approximating that of genomic amplification of HCV RNA. *Hepatology* 32: 388-393, 2000
115. Umemura T, Yoshizawa K, Ota M, Katsuyama Y, Inada H, Tanaka E, Kiyosawa K: Analysis of

- T cell repertoire in the liver of patients with chronic hepatitis C. *Clin Exp Immunol* 121: 120-126, 2000
116. Muramatsu T, Hora K, Ako S, Tachibana N, Hora K, Tanaka E: The role of hepatitis C virus infection in glomerulopathy. *Hepatol Res* 18: 190-202, 2000
117. Orii K, Tanaka E, Rokuhara A, Maruyama A, Ichijo T, Yoshizawa K, Kendo K: Persistent infection mechanism of GB virus C/hepatitis G virus differs from that of hepatitis C virus. *Intervirology* 43: 139-145, 2000
118. Nishizawa Y, Tanaka E, Orii K, Rokuhara A, Ichijo T, Yoshizawa K, Kiyosawa K: Clinical impact of genotype 1 TT virus infection in patients with chronic hepatitis C and response of TT virus to alpha-interferon. *J Gastroen Hepatol* 15: 1292-1297, 2000
119. Rokuhara A, Tanaka E, Yagi S, Mizokami M, Hashikura Y, Kawasaki S, Kiyosawa K: De novo infection of hepatitis B virus in patients with orthotopic liver transplantation: analysis by determining complete sequence of the genome. *J Med Virol* 62: 471-478, 2000
120. Tanaka E, Kiyosawa K: Natural history of acute hepatitis C. *J Gastroenterol Hepatol* 15 (suppl): E97-E104, 2000
121. Kiyosawa K, Tanaka E: A new era of interferon treatment for chronic hepatitis C is coming. *J Gastroenterol* 5: 652-654, 2000
122. Desmond P, Yano M, Kaldor J, Kao JH, Tanaka E, Amarapurkar D, Yatsuhashi H, Zeniya M: Asia-pacific consensus on diagnosis and treatment of chronic hepatitis B and C . In: Liaw YF, McCaughey G, Farrell G, Yano M (eds), Draft working party reports from the Asia-Pacific consensus on prevention and management of chronic hepatitis B and C, pp3i-3iv, Blackwell Science Asia Pty Ltd., Sidney, 2000
123. Aoyagi K, Ohue C, Iida K, Kimura T, Tanaka E, Kiyosawa K, Yagi S: Development of a simple and highly sensitive enzyme immunoassay for hepatitis C virus core antigen. *J Clin Microbiol* 37: 1802-1808, 1999
124. Kobayashi M, Tanaka E, Nakayama J, Furuwatari C, Katsuyama T, Kawasaki S, Kiyosawa K: Detection of GB virus-C/hepatitis G virus genome in peripheral blood mononuclear cells and liver tissue. *J Med Virol* 58: 114-121, 1999
125. Matsumoto A, Yeo AET, Shih JWK, Tanaka E, Kiyosawa K, Alter HJ. Transfusion-associated TT virus infection and its relation to liver disease. *Hepatology* 30: 283-288, 1999
126. Oguchi T, Tanaka E, Orii K, Kobayashi M, Hora K, Kiyosawa K: Transmission of and liver injury by TT virus in patients on maintenance hemodialysis. *J Gastroenterol* 34: 234-240, 1999
127. Orii K, Tanaka E, Umemura T, Rokuhara A, Iijima A, Yoshizawa K, Imai H, Kiyosawa K: Prevalence and disease association of TT virus infection in Japanese patients with viral hepatitis. *Hepatol Res* 14: 161-170, 1999
128. Rumin S, Berthillon P, Tanaka E, Kiyosawa K, Trabaud MA, Bizollon T, Gouillat C, Gripon P, Guguen-Guillouzu C, Inchauspe G, Trepo C: Dynamic analysis of hepatitis C virus replication

- and quasispecies selection in long-term cultures of adult human hepatocytes infected in vitro. *J Gen Virol* 80: 3007-3018, 1999
129. Umemura T, Tanaka E, Ota M, Orii K, Yoshizawa K, Imai H, Sodeyama T, Kiyosawa K: TT virus infection in an area of high-endemicity for hepatitis C. *Hepatol Res* 13: 212-220, 1999
130. Vidalin O, Tanaka E, Spengler U, Trepo C, Inchauspe G: Targeting of hepatitis C virus core protein for MHC I or MHC II presentation does not enhance induction of immune responses to DNA vaccination. *DNA Cell Biol* 18: 611-621, 1999
131. Yoshizawa K, Ota M, Katsuyama Y, Ichijo T, Inada H, Umemura T, Tanaka E, Kiyosawa K: T cell repertoire in the liver of patients with autoimmune hepatitis. *Hum Immunol* 60: 806-815, 1999
132. Kiyosawa K, Tanaka E: GB virus C/hepatitis G virus. *Intervirology* 42: 185-195, 1999
133. Tanaka E. Does GBV-C/HGV replicate in the liver? *J Gastroenterol* 34: 721-723, 1999
134. Kobayashi M, Tanaka E, Oguchi H, Hora K, Kiyosawa K: Prospective follow-up study of hepatitis C virus infection in patients undergoing maintenance haemodialysis: comparison among haemodialysis units. *J Gastroen Hepatol* 13: 604-609, 1998
135. Kobayashi M, Tanaka E, Matsumoto A, Yoshizawa K, Imai H, Sodeyama T, Kiyosawa K: Clinical application of hepatitis C virus core protein in early diagnosis of acute hepatitis C. *J Gastroenterol* 33: 508-511, 1998
136. Kumagai T, Malaty HM, Graham DY, Hosogaya S, Misawa K, Furihata K, Ota H, Sei C, Tanaka E, Akamatsu T, Shimizu T, Kiyosawa K, Katsuyama T: Acquisition versus loss of helicobacter pylori infection in Japan: results from an 8-year birth cohort study. *J Infect Dis* 178: 717-721, 1998
137. Tanaka E, Tacke M, Kobayashi M, Nakatsuji Y, Kiyosawa K, Schmolke S, Engel AM, Hess G, Alter HJ: Past and present hepatitis G virus infections in area where hepatitis C is highly endemic and those where it is not endemic. *J Clin Microbiol* 36: 110-114, 1998
138. Tanaka E, Kiyosawa K, Shimoda K, Hino K, Tacke M, Schmolke S, Engel AM, Hess G: Evolution of hepatitis G virus infection and antibody response to envelope protein with transfusion-associated non-A, non-B hepatitis. *J Viral Hepatitis* 5: 153-159, 1998
139. Kiyosawa K, Tanaka E, Sodeyama T: Hepatitis C virus and hepatocellular carcinoma, In: Reesink HW (ed), *Hepatitis C Virus*, no. 62, pp161-180, Curr Stud Hematol Blood Transf, Basel, 1998
140. Kiyosawa K, Ichijo T, Kobayashi M, Tanaka E, Sodeyama T: Hepatitis C: diagnosis, quantification and genotyping. In: Sarin SK and Hess G (eds), *Transfusion Associated Hepatitis: Diagnosis, Treatment and Prevention*, pp186-195, CBS PUBLISHERS & DISTRIBUTORS, New Delhi, 1998
141. Ichijo T, Nakatsuji Y, Tanaka E, Alter HJ, Yoshizawa K, Imai H, Sodeyama T, Kiyosawa K: Autoimmune hepatitis type 1 without evidence of hepatitis G virus infection. *Int Hepatol Commun* 6: 219-224, 1997

142. Kobayashi M, Tanaka E, Matsumoto A, Ichijo T, Kiyosawa K: Antibody response to E2/NS1 hepatitis C virus protein in patients with acute hepatitis C. *J Gastroen Hepatol* 12: 73-76, 1997
143. Tanaka E, Yamaguchi K, Uemura K, Kobayashi M, Iijima A, Kiyosawa K, Yagi S, Hasegawa A: Hepatitis G virus/GB virus C infection in patients with chronic non-B, non-C hepatitis. *Int Hepatol Commun* 6: 137-143, 1997
144. Tanaka E, Nakatsuji Y, Kobayashi M, Iijima A, Ichijo T, Imai H, Yoshizawa K, Sodeyama T, Kiyosawa K: Hepatitis G virus/GB virus C infection in an area of high endemic hepatitis C virus infection. *Hepatol Res* 7: 130-135, 1997
145. Ideura T, Tanaka E, Nakatsuji Y, Kobayashi M, Kanno Y, Oguchi H, Hora K: Clinical significance of hepatitis G virus infection in patients on long-term haemodialysis. *J Gastroen Hepatol* 12: 762-765, 1997
146. Ichijo T, Matsumoto A, Kobayashi M, Furihata K, Tanaka E. Quantitative measurement of HCV RNA in the serum: A comparison of three assays based on different principles. *J Gastroen Hepatol* 12: 500-506, 1997
147. Tacke M, Schmolke S, Schlueter V, Sauleda S, Esteban JI, Tanaka E, Kiyosawa K, Alter HJ, Schmitt U, Hess G, Ofenloch-Haehnle B, Engel AM: Humoral immune response to the E2 protein of hepatitis G virus is associated with long-term recovery from infection and reveals a high frequency of hepatitis G virus exposure among healthy blood donors. *Hepatology* 26: 1626-1633, 1997
148. Alter HJ, Nakatsuji Y, Tanaka E, Melpolder J, Kim J, Shih JWK, Kiyosawa K: The role of the hepatitis G virus in the causation of transfusion associated hepatitis and cryptogenic liver disease and the impact of HGV on coexistent HCV infection. In: Rizzetto M, et al. (eds.), *Viral Hepatitis and Liver Disease*. pp358-362, Edizioni Minerva Medica S.p.A., Torino, 1997
149. Mori H, Yabu K, Yoshizawa K, Tanaka E, Kiyosawa K: Lymphocyte proliferative responses to recombinant hepatitis C virus antigens in patients with chronic hepatitis C. *J Gastroen Hepatol* 11: 697-704, 1996
150. Shimodaira S, Ishida F, Ichikawa N, Tahara T, Kato T, Kodaira H, Ito T, Tanaka E, Sodeyama T, Kiyosawa K, Kitano K: Serum thrombopoietin (c-Mpl ligand) levels in patients with liver cirrhosis. *Thromb and Haemostasis* 76: 545-548, 1996
151. Tanaka E, Kiyosawa K, Matsumoto A, Kashiwakuma T, Hasegawa A, Mori H, Yanagihara O, Ohta Y: Serum levels of hepatitis C virus core protein in patients with chronic hepatitis C treated with interferon Alfa. *Hepatology* 23: 1330-1333, 1996
152. Kobayashi M, Tanaka E, Sodeyama T, Urushihara A, Matsumoto A, Kiyosawa K: The natural course of chronic hepatitis C: a comparison between patients with genotypes 1 and 2 hepatitis C viruses. *Hepatology* 23: 695-699, 1996
153. Nakatsuji Y, Shih JWK, Tanaka E, Kiyosawa K, Wages Jr J, Kim JP and Alter HJ: Prevalence and disease association of hepatitis G virus infection in Japan. *J Viral Hepatitis* 3: 307-316, 1996

154. Kashiwakuma T, Hasegawa A, Kajita T, Takata A, Mori H, Ohta Y, Tanaka E, Kiyosawa K, Tanaka T, Tanaka S, Hattori N, Kohara M: Detection of hepatitis C virus specific core protein in serum of patients by a sensitive fluorescence enzyme immunoassay (FEIA). *J Immunol Methods* 190: 79-89, 1996
155. Tanaka E, Alter HJ, Nakatsuji Y, Shih JWK, Kim JP, Matsumoto A, Kobayashi M, Kiyosawa K: Effect of hepatitis G virus infection on chronic hepatitis C. *Ann Intern Med* 125: 740-743, 1996
156. Suzuki T, Tanaka E, Matsumoto A, Urushihara A, Sodeyama T, Kiyosawa K: Usefulness of simple assays for serum concentration of hepatitis C virus (HCV) RNA and HCV genotype in predicting response of patients with chronic hepatitis C to interferon alpha2a therapy. *J Med Virol* 46: 162-168, 1995
157. Tanaka E, Kiyosawa K, Matsushima T, Ishikawa K, Hino K, Tanaka S, Nose H, Kumada H, Iino S, Kamimura T, Unoura M, Mizokami M, Okanoue T, Kuroki T, Yamada G, Miura T, Yano M, Tsubouchi H, Kohara M, Sato S, Hattori N. Genotyping ELISA Study Group: Epidemiology of genotypes of hepatitis C virus in Japanese patients with type C chronic liver diseases: a multi-institute analysis. *J Gastroen Hepatol* 10: 538-545, 1995
158. Tanaka T, Lau JYN, Mizokami M, Orito E, Tanaka E, Kiyosawa K, Yasui K, Ohta Y, Hasegawa A, Tanaka S, Kohara M: Simple fluorescent enzyme immunoassay for detection and quantification of hepatitis C viremia. *J Hepatol* 23: 742-745, 1995
159. Kiyosawa K, Tanaka E, Sodeyama T, Yoshizawa K, Yabu K, Furuta K, Imai H, Nakano Y, Usuda S, Uemura K, Furuta S, Watanabe Y, Watanabe J, Fukuda Y, Takayama T, South Kiso Hepatitis Study Group: Transmission of hepatitis C in an isolated area in Japan: community-acquired infection. *Gastroenterology* 106: 1596-1602, 1994
160. Matsumoto A, Tanaka E, Suzuki T, Ogata H, Kiyosawa K: Viral and host factors that contribute to efficacy of interferon- α 2a therapy in patients with chronic hepatitis C. *Digest Dis Sci* 39: 1273-1280, 1994
161. Tanaka E, Kiyosawa K, Matsumoto A, Sodeyama T, Urushihara A, Suzuki T, Kobayashi M, Furuta S: Prevalence of hepatitis C virus with different genotypes determined by a group-specific antibody assay in Japanese patients with chronic liver disease due to hepatitis C virus infection. *Jpn J Med Sci Biol* 47: 47-57, 1994
162. Uchida T, Shikata T, Tanaka E, Kiyosawa K: Immunoperoxidase staining of hepatitis C virus in formalin-fixed, paraffin-embedded needle liver biopsies. *Virchows Archiv* 424: 465-469, 1994
163. Urushihara A, Sodeyama T, Matsumoto A, Tanaka E: Change in antibody titers to hepatitis C virus following interferon therapy for chronic infection. *J Med Virol* 42: 348-356, 1994
164. Urushihara A, Suzuki T, Matsumoto A, Tanaka E, Sodeyama T, Kiyosawa K, Furuta S: Quantitative assay for anti-HCV-core antibody in healthy individuals found anti-HCV positive during a mass screening. *Int Hepatol Commun* 2: 47-51, 1994
165. Yabu K, Kiyosawa K, Ako S, Usuda S, Yoshizawa K, Tanaka E, Sodeyama T, Furuta S. Type

- C chronic hepatitis associated with thrombocytopenia in two patients. *J Gastroenterol Hepatol* 9: 99-104, 1994
166. Yabu K, Kiyosawa K, Mori H, Matsumoto A, Yoshizawa K, Tanaka E, Furuta S: Serum collagen type IV for the assessment of fibrosis and resistance to interferon therapy in chronic hepatitis C. *Scand J Gastroenterol* 29: 474-479, 1994
167. Yamaguchi K, Tanaka E, Higashi K, Kiyosawa K, Matsumoto A, Furuta S, Hasegawa A, Tanaka S, Kohara M: Adaptation of hepatitis C virus for persistent infection in patients with acute hepatitis. *Gastroenterology* 106: 1344-1348, 1994
168. Kiyosawa K, Tanaka E, Sodeyama T, Furuta S: Natural history of hepatitis C. *Intervirology* 37: 101-107, 1994
169. Furuta K, Kiyosawa K, Sone H, Matsumoto A, Tanaka E, Sodeyama T, Imai H, Furuta S: Chronological changes of hepatitis B and C virus markers in Japanese patients with hepatocellular carcinoma. In: Nishioka K, et al. (eds.), *Viral Hepatitis and Liver Disease*, pp690-693, Springer-Verlag, Tokyo, 1994
170. Kiyosawa K, Sodeyama T, Tanaka E, Furuta S: Hepatitis C virus infection in health care workers. In: Nishioka K, et al. (eds), *Viral Hepatitis and Liver Disease*, pp479-482, Springer-Verlag, Tokyo, 1994
171. Mori H, Yabu K, Yoshizawa K, Usuda S, Tanaka E, Kiyosawa K, Hasegawa A, Kohara M, Furuta S: In vitro immune responses specific for NS3 regional peptide (C7) and core regional peptide (C11) of HCV in chronic hepatitis C. In: Nishioka K, et al. (eds.), *Viral Hepatitis and Liver Disease*, pp 182-185, Springer-Verlag, Tokyo, 1994
172. Sodeyama T, Kiyosawa K, Urushihara A, Matsumoto A, Tanaka E, Furuta S, Mizokami M, Akahane Y: Transmission of hepatitis C virus through needlestick accidents in health care workers. In: Nishioka K, et al. (eds.), *Viral Hepatitis and Liver Disease*, pp 459-462, Springer-Verlag, Tokyo, 1994
173. Khan M, Husain M, Yano M, Hashizume K, Yousuf M, Tanaka E, Matsumoto A, Furuta S, Kiyosawa K: Comparison of seroepidemiology of hepatitis C in blood donors between Bangladesh and Japan. *Gastroenterologia Jpn* 28 (suppl 5): 28-31, 1993
174. Kiyosawa K, Seki T, Tanaka E, Sodeyama T, Furuta K, Furuta S, Hino K, Ota M, Inoko H: Comparison of the clinical and immunogenetic features between patients with autoimmune hepatitis and patients with type C chronic active hepatitis. *Gastroenterologia Jpn* 28 (suppl 4): 63-68, 1993
175. Kiyosawa K, Sodeyama T, Tanaka E: Progress of asymptomatic hepatitis B surface antigen carriers. *Ann Intern Med* 119: 535, 1993
176. Nakamura T, Hayama M, Sakai T, Hotchi M, Tanaka E: Proliferative activity of hepatocytes in chronic viral hepatitis as revealed by immunohistochemistry for proliferating cell nuclear antigen. *Hum Pathol* 24: 750-753, 1993
177. Nakano Y, Kiyosawa K, Sodeyama T, Tanaka E, Yoshizawa K, Furuta K, Nakatsuji Y,

- Urushihara A, Furuta S: Anti-c100 antibodies to hepatitis C virus in patients with chronic hepatitis C virus infection treated with interferon. *Scand J Gastroenterol* 28: 335-342, 1993
178. Seki T, Kiyosawa K, Ota M, Furuta S, Fukushima H, Tanaka E, Yoshizawa K, Kumagai T, Mizuki N, Ando A, Inoko H: Association of primary biliary cirrhosis with leukocyte antigen DPB1*0501 in Japanese patients. *Hepatology* 18: 73-78, 1993
179. Sodeyama T, Kiyosawa K, Urushihara A, Matsumoto A, Tanaka E, Furuta S, Akahane Y: Detection of hepatitis C virus markers and hepatitis C virus genomic-RNA after needlestick accidents. *Arch Intern Med* 153: 1565-1572, 1993
180. Tanaka E, Kiyosawa K, Nakatsuji Y, Inoue Y, Miyamura T, Chiba J, Furuta S: Clinical significance of antibodies to nonstructural and core protein of hepatitis C virus in posttransfusion hepatitis patients during long-term follow-up. *J Med Virol* 39: 318-324, 1993
181. Tanaka E, Kiyosawa K, Seki T, Matsumoto A, Sodeyama t, Furuta S, Kumagai T, Kohara M: Low prevalence of hepatitis C virus infection in patients with auto-immune hepatitis type 1. *J Gastroenterol Hepatol* 8: 442-447, 1993
182. Oguchi H, Miyasaka M, Tokunaga S, Hora K, Ichikawa S, Ochi T, Yamada K, Nagasawa M, Kanno Y, Aizawa T, Watanabe H, Yoshizawa S, Sato K, Terashima M, Yoshie T, Oguchi S, Tanaka E, Kiyosawa K, Furuta S: Hepatitis virus infection (HBV and HCV) in eleven Japanese hemodialysis units. *Clin Nephrol* 38: 36-43, 1992
183. Yoshizawa K, Kiyosawa K, Usuda S, Yabu K, Nakatsuji Y, Yamada S, Furuta K, Tanaka E, Sodeyama T, Furuta S, Kaneko S, Nakane PK: New hepatocellular carcinoma cell line SUHC-1 established from a patient with hepatitis C virus RNA in serum. *Jpn J Cancer Res* 83: 871-877, 1992
184. Nakatsuji Y, Matsumoto A, Tanaka E, Ogata H, Kiyosawa K: Detection of chronic hepatitis C virus infection by four diagnostic systems: First-generation and second-generation Enzyme-linked immunosorbent assay, second-generation recombinant immunoblot assay and nested polymerase chain reaction analysis. *Hepatology* 16: 300-305, 1992
185. Yousuf M, Nakano Y, Tanaka E, Sodeyama T, Kiyosawa K: Persistence of viremia in patients with type C chronic hepatitis during long-term follow-up. *Scand J Gastroenterol* 27: 812-816, 1992
186. Shimizu S, Kiyosawa K, Sodeyama T, Tanaka E, Nakano M: High prevalence of antibody to hepatitis C viruses in heavy drinkers with chronic liver diseases in Japan. *J Gastroenterol Hepatol* 7: 30-35, 1992
187. Saito M, Hasegawa A, Kashiwakuma T, Kohara M, Sugi M, Miki K, Yamamoto T, Mori H, Ohta Y, Tanaka E, Kiyosawa K, Furuta S, Wakashima M, Tanaka S, Hattori N: Performance of an enzyme-linked immunosorbent assay system for antibodies to hepatitis C virus with two new antigens (c11/ c7). *Clin Chem* 38: 2434-2439, 1992
188. Tanaka E, Kiyosawa K, Sodeyama T, Hayata T, Ohike Y, Nakano Y, Yoshizawa K, Furuta S, Watanabe Y, Watanabe J, Nishioka K: Prevalence of antibody to hepatitis C virus in Japanese

- school children: comparison with adult blood donors. Am J Trop Med Hyg 46: 460-464, 1992
189. Kiyosawa K, Tanaka E, Sodeyama T, Nakano Y, Furuta S: Epidemiology of acute type C hepatitis and its prognosis. In: Tsuji Y and Yamada G (eds), Immune response and interferon treatment in viral hepatitis, pp27-32, Nankodo, Tokyo, 1992
190. Kiyosawa K, Sodeyama T, Tanaka E, Shimizu S, Furuta S, Miyazaki Y, Akahane Y, Suzuki H: Intrafamilial transmission of hepatitis C virus in Japan. J Med Virol 33: 114-116, 1991
191. Kiyosawa K, Sodeyama T, Tanaka E, Nakano Y, Furuta S, Nishioka K, Purcell RH, Alter HJ: Hepatitis C in hospital employees with needle stick injuries. Ann Intern Med 115: 367-369, 1991
192. Nakatsuji Y, Kiyosawa K, Tanaka E, Sodeyama T, Horigome N, Kajikawa S, Naito S, Akahane Y: Expression of hepatitis B surface antigen subtypes in liver of patients with hepatocellular carcinoma; comparison of subtypes in serum and liver. Liver 11: 176-184, 1991
193. Nishioka K, Watanabe J, Furuta S, Tanaka E, Suzuki H, Iino S, Tsuji T, Yano M, Kuo G, Choo QL, Houghton M, Oda T: Antibody to the hepatitis C virus in acute hepatitis and chronic liver diseases in Japan. Liver 11: 65-70, 1991
194. Nishioka K, Watanabe J, Furuta S, Tanaka E, Iino S, Suzuki H, Tsuji T, Yano M, Kou G, Choo QL, Houghton M, Oda T: A high prevalence of antibody to hepatitis C virus in patients with hepatocellular carcinoma in Japan. Cancer 67: 429-433, 1991
195. Tanaka E, Kiyosawa K, Sodeyama T, Nakano Y, Yoshizawa K, Hayata T, Shimizu S, Nakatsuji Y, Koike Y, Furuta S: Significance of antibody to hepatitis C virus in Japanese patients with viral hepatitis: relationship between anti-HCV antibody and the progression of non-A, non-B post-transfusion hepatitis. J Med Virol 33: 117-122, 1991
196. Furuta S, Tanaka E, Kiyosawa K, Suzuki H, Iino S, Tsuji T, Yano M, Nishioka K, Watanabe J, Oda T: Antibody to hepatitis C virus in non-A, non-B hepatitis and its clinical significance. In: Shikata T, et al. (eds), Viral hepatitis C, D and E, pp79-85, Excerpta Medica, Amsterdam, 1991
197. Kiyosawa K, Sodeyama T, Gibo Y, Tanaka E, Furuta K, Nakano Y, Koike Y, Hayata T, Furuta S, Nishioka K: Histological outcome of post-transfusion non-A, non-B hepatitis in patients with abnormal serum transaminase levels for over five years; the role of hepatitis C virus. In: Shikata T, et al. (eds), Viral hepatitis C, D and E, pp99-101, Excerpta Medica, Amsterdam, 1991
198. Furuta S, Kiyosawa K, Tanaka E: HCV infection among acute and chronic liver disease. In: Abe T, et al. (eds), Proceedings of the sixth international symposium on hemophilia treatment, pp151-159, National foundation of Japan for promotion of comprehensive care of hemophiliacs, Tokyo, 1991
199. Kiyosawa K, Hayata T, Sodeyama T, Tanaka E, Nakano Y, Yousuf M, Furuta S: Changes of immunological parameters in patients with type B and type C hepatitis during interferon treatment. In: Tsuchiya M, et al. (eds.), Frontiers of mucosal immunology, pp15-18, Excerpta

Medica, Amsterdam, 1991

200. Kiyosawa K, Sodeyama T, Tanaka E, Nakano Y, Shimizu S, Furuta S, Nishioka K, Alter HJ, Purcell RH: Causal relationship between non-A, non-B hepatocellular carcinoma after posttransfusion hepatitis and hepatitis C virus. In: Nishioka K, et al. (eds), *Viral Hepatitis and Liver Disease*, pp592-594, William & Wilkins, Baltimore, 1991
201. Kiyosawa K, Sodeyama T, Tanaka E, Gibo Y, Yoshizawa K, Nakano Y, Furuta S, Akahane Y, Nishioka K, Purcell RH, Alter HJ: Interrelationship of blood transfusion, non-A, non-B hepatitis and hepatocellular carcinoma: analysis by detection of antibody to hepatitis C virus. *Hepatology* 12: 671-675, 1990
202. Kiyosawa K, Tanaka E, Sodeyama T, Furuta K, Usuda S, Yousuf M, Furuta S: Transition of antibody to hepatitis C virus from chronic hepatitis to hepatocellular carcinoma. *Jpn J Cancer Res* 81: 1089-1091, 1990
203. Nakano Y, Kiyosawa K, Sodeyama T, Tanaka E: Comparative study of clinical, histological and immunological responses to interferon therapy in type non-A, non-B, and type B chronic hepatitis. *Am J Gastroenterol* 85: 24-29, 1990
204. Oguchi H, Terashima M, Tokunaga S, Kiyosawa K, Tanaka E, Furuta S, Kanno Y, Aizawa T, Nishioka K: Prevalence of anti-HCV in patients on long term hemodialysis. *J Nephrol* 32: 313-317, 1990
205. Watanabe J, Minegishi K, Mitsumori T, Ishifuji M, Oguchi T, Ueda M, Tokunaga E, Tanaka E, Kiyosawa K, Furuta S, Katayama T, Kuo G, Choo QL, Houghton M, Nishioka K: Prevalence of anti-HCV antibody in blood donors in the Tokyo area. *Vox Sang* 59: 86-88, 1990
206. Gibo Y, Kiyosawa K, Furuta K, Sodeyama T, Tanaka E, Furuta S, Nakano M: Retrospective study of NANB CH to estimate histologic outcome using Knodell's histology activity index. In: Sung JL and Cheu DS (eds), *Viral hepatitis and hepatocellular carcinoma*, pp262-267, Excerpta Medica, Hong Kong, 1990
207. Kiyosawa K, Sodeyama T, Nakano Y, Yoda H, Tanaka E, Hayata T, Tsuchiya K, Yousuf M, Furuta S: Treatment of chronic non-A, non-B hepatitis with human interferon beta: a preliminary study. *Antiviral Res* 12: 151-162, 1989
208. Kiyosawa K, Oofusa H, Saitoh H, Sodeyama T, Tanaka E, Furuta S, Itho S, Ogata H, Kobuchi H, Kameko M, Kanai M: Seroepidemiology of hepatitis A, B and D viruses and human T-lymphocyte tropic viruses in Japan drug abusers. *J Med Virol* 29: 160-163, 1989
209. Kiyosawa K, Nakamura M, Sodeyama T, Tanaka E, Nakano Y, Furuta S: Relationship between hepatitis B virus deoxyribonucleic acid, HBeAg/anti-HBe status in serum and HBcAg in liver: its clinical significance in chronic HBsAg carriers. *Jpn J Med* 27: 267-271, 1988
210. Kiyosawa K, Wada S, Imai Y, Sodeyama S, Tanaka E, Yoda H, Furuta S, Kameko M, Kanai M: Significance of IgM antibody to hepatitis B core antigen for the differential diagnosis of acute and chronic hepatitis B virus infection and for the evaluation of the inflammatory activity of type B chronic liver disease. *Gastroenterologia Jpn* 21: 601-607, 1986