INAUGURATION of PROFESSOR HAK HOTTA, M.D., Ph.D. as HONORARY PROFESSOR OF UNIVERSITAS AIRLANGGA

Speeches and Oration

UNIVERSITAS AIRLANGGA
SURABAYA, INDONESIA
AUGUST 28, 2014

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Assalamu'alaikum wr. wb.

Excellencies...
Chairman, Academic Senate of Universitas Airlangga,
Vice Rector(s),
Directors,
Deans and Vice Deans,
Our Distinguished Guests from Japan,
And All Other Distinguished Officials of
Universitas Airlangga
Ladies and Gentlemen,

In this great occasion, on behalf of Universitas Airlangga, first I would like to welcome and greet Prof. Hak HOTTA, M.D., Ph.D, the Professor in the field of Microbiology, from Kobe University, Japan. It is such a profound honor for Universitas Airlangga to have a very distinguished researcher with excellent experiences and numerous international publications.

Dear Prof. Hak HOTTA, M.D., Ph.D,

In this wonderful occasion, my speech is not only a welcoming speech addressed to welcome an excellent guest at Universitas Airlangga. However, it is an important speech for both Universitas Airlangga in general and you in particular. Through both extensive and intensive considerations, Universitas Airlangga has decided to reward you with a prestigious assignment as **Honorary Professor** at the Faculty of Medicine, Universitas Airlangga.

The consideration is based on several points. The first point is the university's awareness to improve the quality of teaching and

learning especially in the field of Microbiology at Faculty of Medicine Universitas Airlangga by inviting experts and reputable scholars and researchers from other institutions that could be both from within the country itself and from other countries.

The second consideration is the key role and significant contributions that Prof. Hak HOTTA, has made in various collaborative research and education projects between Universitas Airlangga and Kobe University, Japan since many years ago up until the present date.

The collaboration with Universitas Airlangga started when Professor Hotta became the project leader in JICA Tropical Disease Control Project from 1991 until 1993, which was the start-up of Tropical Disease Research Center (TDRC), the initial name of our Institute of Tropical Disease. From 1991 also, until 1997, there was a large-scale collaborative research project between UNAIR's TDRC and Kobe University with Thailand, the Philippines and Singapore. This collaborative research continued until 2002.

After that, a number of other projects evolved, in which Professor Hotta was involved as the leader or co-leader, such as the one with Japan's Ministry of Education, Culture, Sports, and Science and Technology (or MEXT) and Japan Science and Technology Agency (or JST), for Emerging and Re-emerging Infectious Diseases. There was also another project in the Identification of Anti-Hepatitis C Virus (or HCV) Substances and Development of HCV and Dengue Vaccines. In 2012, Professor Hotta became the leader of a very big project called Re-inventing Japan Project on Cooperative Education, that involved many parties, such as Japan's MEXT/JSPS (or Japan Society for the Promotion of Science), Universitas Airlangga, Universitas Gajah Mada, Universitas Indonesia, Mahidol University and Chiang Mai University from Thailand, and Osaka University and Kobe University from Japan.

With all those amazing projects, we can see, then, that Professor Hak Hotta has truly shown his exceptional leadership capability.

These projects become successful and reliable more or less in favor of Prof. HOTTA's leadership.

Not only becoming very successful in research, Professor Hotta has also shown his remarkable achievement in becoming an academic advisor for a number of UNAIR's academicians who spent some time at Kobe University for staff exchanges or for Ph.D studies. This, again, shows the superb academic capability of Professor Hotta and the close academic and research relationship between Kobe University and Universitas Airlangga.

Last but not least, Prof. Hak HOTTA, also received Grants-in-Aid for collaborative research from the Ministry of Education of Japan for his intensive studies on hepatitis viruses from 1993 to 2005.

Therefore, Universitas Airlangga considers that it is necessary to issue a Rector's Decree regarding the assignment of Prof. Hak HOTTA, as the Honorary Professor at Faculty of Medicine, Universitas Airlangga

As one of the biggest universities in Indonesia, and surely the biggest university in the eastern part of Indonesia, with more than 30 thousand students from all degrees, and as an independent state-university which focuses to be the center of health sciences in Indonesia, I hope that you could be an integral part of this university, and vice versa. Your achievement and excellence are going to be recorded in the history of Universitas Airlangga.

Finally, I would like to congratulate you for this assignment. The mutual benefits and cooperation between you as an individual, Kobe University and Japan, and Universitas Airlangga as institutions are highly expected to keep flourishing in the future.

Wassalamu'alaikum wr. wb.
Rector of Universitas Airlangga,

Prof. Dr. H. Fasich, Apt

Assalamu'alaikum wa rahmatullahi wa barakatuh,

The Honorable Rector of The Universitas Airlangga, Professor Hak Hotta and Professor Yoshitake Hayashi,

Dear Director of Dr. Soetomo General Hospital, Director of The Education Hospital of The Universitas Airlangga, and Deans of Faculties in The Universitas Airlangga,

It is a great honor and pleasure to present The Honorary Professorships in The Department of Clinical Microbiology, Faculty of Medicine, Universitas Airlangga to Professor Hotta.

Professor Hotta has been recognized for his excellent collaborative research with The Department of Clinical Microbiology, Faculty of Medicine, Universitas Airlangga for over 30 years. This signifies to the improvement of our staff's capacity buildings, and also to the well achievement of The Postgraduate Education Programs including international publications in scientific journals. All these eventually lead to the increment of The University's performance.

May this excellence continue, and hopefully flourishes onto other aspects of collaboration, including in The Undergraduates and Graduate Education Programs of all other Faculties in The Universitas Airlangga.

Wassalamu'alaikum wa rahmatullahi wa barakatuh.

Prof. Dr. Agung Pranoto, dr., M.Kes., Sp.PD., K-EMD., FINASIM
Dean of Faculty of Medicine, Universitas Airlangga

Sustained Mutual Collaboration with Mentors and Friends in Universitas Airlangga

Hak Hotta, M.D., Ph.D.
Professor, Division of Microbiology
Kobe University Graduate School of Medicine

1. Preface

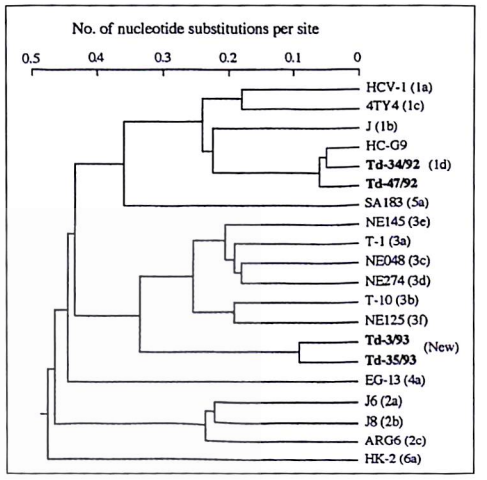
In 1964, Kobe University School of Medicine started medical surveillance on tropical and infectious diseases in Indonesia, dispatching the first surveillance team to Lombok and Bali. The second and third surveillance teams were dispatched to Metro, Sumatera, and Majalengka, West Java, in 1965 and 1966, respectively. Academic collaboration between Universitas Airlangga and Kobe University School of Medicine began in 1968 when the fourth surveillance team was dispatched to Surabaya, followed by the fifth surveillance team in 1970, to conduct medical researchin collaboration with Universitas Airlangga. Although I was not involved in the medical surveillanceat that time, the cornerstone for the collaboration between Indonesia and Japan led me at a later date to conductoursustained collaborative research with universities in Indonesia, especially Universitas Airlangga.

In 1977, I joined in virology research at Department of Microbiology, Kobe University School of Medicine, where collaboration with Indonesian universities was more actively going on. I met and had a good time with Indonesian doctors, who came to Kobe to study abroad, such as Dr. Noor Rachman and Dr. Soedarto from Universitas Airlangga as well as Dr. Agus Sjahrurachman Wiharta from Universitas Indonesia in 1980's.

2. "Tropical Infectious Disease Control Project in Indonesia" supported by JICA (1991 – 1993)

In 1991, I was asked by Prof. Morio Homma, who was the Dean of Kobe University School of Medicine and also my mentor in Department of Microbiology, to visit Universitas Airlangga as an expert of a project supported by the Japan International Cooperation Agency (JICA). Therefore, I visited Surabaya and Jakarta for the first time to hold a series of important meetings with high authorities of the universities and the Government of Republic of Indonesia, and finally concluded Minutes of Meetings with Directorate General of Higher Education (DGHE), the Ministry of Education and Culture, Republic of Indonesia, to launch "Tropical Infectious Disease Control Project in Indonesia" supported by JICA.

In 1992, Dr. Nobumasa Kataoka and I stayed in Surabaya for a month or two and set up research facilities in Tropical Disease Research Center (TDRC), Faculty of Medicine, Universitas Airlangga. My Indonesian colleagues, including Dr. Soetjipto and Dr. Maria Inge Lusida, and I started hepatitis C virus (HCV) molecular epidemiologic study using PCR technique. The PCR technique was invented in 1985 and the inventors were awarded Nobel Prize in 1993. This means that we applied this novel and highly advanced technique to our research in Indonesia just 7 years after the invention, and one year before being awarded Nobel Prize. In the initial experiments, we failed to amplify the HCV genome over and over again due probably to some problems in the research apparatus and/or reagents used in PCR. However, we did not give up but continued to improve our techniques and experimental conditions and finally we could successfully amplify parts of the HCV genome. It was very fortunate for us that some of the HCV strains that we amplified turned out to be a novel HCV subtype that is unique to Indonesia. We first named the unique Indonesian subtype as HCV-1d, which was later renamed as HCV-1c by an international research team including myself. We published our findings in international journals, such as *Journal of Clinical Microbiology* and *Archives of Virology* in 1994. We also found a new subtype, named HCV-3g, and published in the same article.



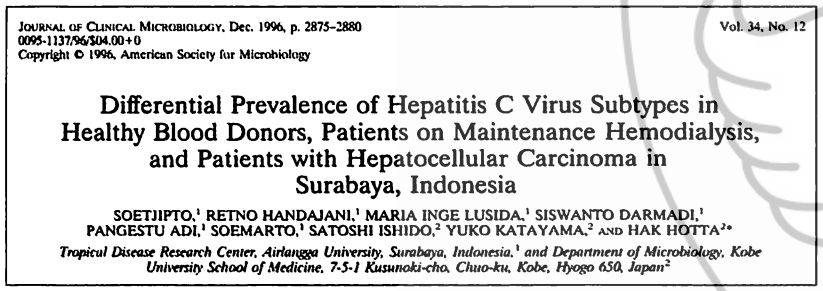
(Hotta et al.,*J Clin Microbiol*, 32:3049-3051, 1994)

From administrative points of view, I would like to express my sincere gratitude to Prof. Ig. N. Gde. Ranuh, Prof. Soemarto and Prof. Rachmat Santoso for their great supports to conduct the "Tropical Infectious Disease Control Project in Indonesia" very smoothly and efficiently.

3. "Large Scale Collaborative Research Project" supported by JSPS (1991 – 2001)

In 1991, while conducting the "Tropical Infectious Disease Control Project in Indonesia" described above, Kobe University School of Medicine launched the "Large Scale Collaborative Research

Project" supported by the Japan Society for the Promotion of Science (JSPS), which aimed to expand collaboration among Indonesia, Thailand, Philippines, Singapore and Japan. Under this scheme, Kobe University School of Medicine and Tropical Disease Research Center (TDRC), Universitas Airlangga, were the principal institutions in Japan and Indonesia, respectively. I was involved in this JSPS project as a research member while serving as the leader of the "Tropical Infectious Disease Control Project in Indonesia" supported by JICA. Through this project, we further conducted comprehensive molecular and sero-epidemiologic studies on HCV in various patients groups, including chronic hepatitis, liver cirrhosis, hepatocellular carcinoma, hemodialysis and blood donors in Indonesia and published the results in a number of international journals, such as *Journal of Clinical Microbiology* and *Microbiology and Immunology*. It is noteworthy that Prof. Soetjipto obtained his Ph.D. from Kobe University in 1996 using one of the papers as his Ph.D. thesis.



JOURNAL OF CLINICAL MICROBIOLOGY, Dec. 1996, p. 2875–2880 Vol. 34, No. 12
0095-1137/96/$04.00+0
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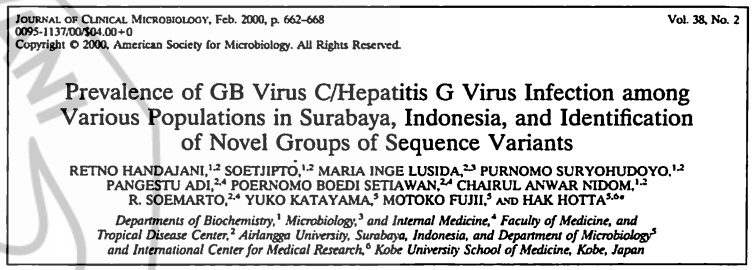
Differential Prevalence of Hepatitis C Virus Subtypes in Healthy Blood Donors, Patients on Maintenance Hemodialysis, and Patients with Hepatocellular Carcinoma in Surabaya, Indonesia

SOETJIPTO,[1] RETNO HANDAJANI,[1] MARIA INGE LUSIDA,[1] SISWANTO DARMADI,[1] PANGESTU ADI,[1] SOEMARTO,[1] SATOSHI ISHIDO,[2] YUKO KATAYAMA,[2] AND HAK HOTTA[2]*

Tropical Disease Research Center, Airlangga University, Surabaya, Indonesia,[1] and Department of Microbiology, Kobe University School of Medicine, 7-5-1 Kusunoki-cho, Chuo-ku, Kobe, Hyogo 650, Japan[2]

In 1997, on the basis of the collaborative activities of the JICA and JSPS projects, Tropical Disease Center (TDC) was established in Universitas Airlangga through the supports from JICA and the Government of Republic of Indonesia. In 1998, I was appointed as the Director of International Center for Medical Research (ICMR), Kobe University School of Medicine, and became in charge of the "Large Scale Collaborative Research Project" supported by JSPS in collaboration with Prof. Yoes Prijatna Dachlan, Director of TDC. In addition to the administrative efforts, Prof. Soetjipto, Prof. Retno Handajani, Prof. Maria Inge Lusida and I conducted collaborative research on molecular epidemiology of another hepatitis-associated GB virus-C (GBV-C) and identified novel groups of GBV-C sequence variants in Indonesia. Prof. Retno conducted this study as the principal investigator and published an article in *Journal of Clinical Microbiology*. Also, Prof. Maria Inge found an interesting correlation between HCV sequence variation and viral load in the patients, and published another article in *Journal of Clinical Microbiology*. Based on those excellent achievements, Prof. Retno and Prof. Maria Inge obtained their Ph.D. from Kobe University in 2001 and 2002, respectively.



JOURNAL OF CLINICAL MICROBIOLOGY, Feb. 2000, p. 662–668 Vol. 38, No. 2
0095-1137/00/$04.00+0
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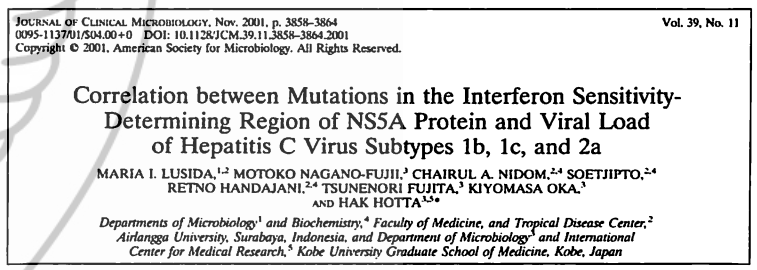
Prevalence of GB Virus C/Hepatitis G Virus Infection among Various Populations in Surabaya, Indonesia, and Identification of Novel Groups of Sequence Variants

RETNO HANDAJANI,[1,2] SOETJIPTO,[1,2] MARIA INGE LUSIDA,[2,3] PURNOMO SURYOHUDOYO,[1,2] PANGESTU ADI,[2,4] POERNOMO BOEDI SETIAWAN,[2,4] CHAIRUL ANWAR NIDOM,[1,2] R. SOEMARTO,[2,4] YUKO KATAYAMA,[3] MOTOKO FUJII,[5] AND HAK HOTTA[5,6]*

Departments of Biochemistry,[1] Microbiology,[3] and Internal Medicine,[4] Faculty of Medicine, and Tropical Disease Center,[2] Airlangga University, Surabaya, Indonesia, and Department of Microbiology[5] and International Center for Medical Research,[6] Kobe University School of Medicine, Kobe, Japan



JOURNAL OF CLINICAL MICROBIOLOGY, Nov. 2001, p. 3858–3864 Vol. 39, No. 11
0095-1137/01/$04.00+0 DOI: 10.1128/JCM.39.11.3858–3864.2001
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Correlation between Mutations in the Interferon Sensitivity-Determining Region of NS5A Protein and Viral Load of Hepatitis C Virus Subtypes 1b, 1c, and 2a

MARIA I. LUSIDA,[1,2] MOTOKO NAGANO-FUJII,[3] CHAIRUL A. NIDOM,[2,4] SOETJIPTO,[2,4] RETNO HANDAJANI,[2,4] TSUNENORI FUJITA,[3] KIYOMASA OKA,[3] AND HAK HOTTA[3,5]*

Departments of Microbiology[1] and Biochemistry,[4] Faculty of Medicine, and Tropical Disease Center,[2] Airlangga University, Surabaya, Indonesia, and Department of Microbiology[3] and International Center for Medical Research,[5] Kobe University Graduate School of Medicine, Kobe, Japan

In 2001, the "Large Scale Collaborative Research Project", which dealt with 1) Perinatology problems in the Tropics, 2) Infectious diseases in the Tropics, such as viral hepatitis, malaria and diarrheal diseases, and 3) Non-communicable diseases in the Tropics, such as malignant tumors, metabolic diseases and hematologic and vascular diseases, successfully completed its mission with high-rank evaluation. As the project leader, I would like to express my sincere gratitude to those who were concerned in this project.

4. Collaborative Research supported by Grants-in-Aid from MEXT (1993 – 2005)

In parallel with the "Large Scale Collaborative Research Project" supported by JSPS, we conducted collaborative research on hepatitis viruses in Asia, including Indonesia, which were supported in part by Grants-in-Aid from the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan. The studies included molecular epidemiology of HCV, hepatitis B virus (HBV) and hepatitis D virus (HDV) in Indonesia. Some of the articles, in which Indonesian researchers were the first authors, are shown below.

Microbiol. Immunol., 40(5), 401–405, 1996

Hepatitis C Virus Infection-Associated Markers in Sera from Blood Donors in Surabaya, Indonesia

Siswanto Darmadi[1], Soetjipto[1], Retno Handajani[1], Maria Inge Lusida[1], Soemarto[1], Hiroshi Sakugawa[2], Satoshi Ishido[3], and Hak Hotta*[,3]

[1]*Tropical Disease Research Center, Airlangga University, Surabaya, Indonesia,* [2]*First Department of Internal Medicine, School of Medicine, University of the Ryukyus, Okinawa 903-01, Japan, and* [3]*Department of Microbiology, Kobe University School of Medicine, Kobe, Hyogo 650, Japan*

Microbiol. Immunol., 47(12), 969–975, 2003

Genotype and Subtype Analyses of Hepatitis B Virus (HBV) and Possible Co-Infection of HBV and Hepatitis C Virus (HCV) or Hepatitis D Virus (HDV) in Blood Donors, Patients with Chronic Liver Disease and Patients on Hemodialysis in Surabaya, Indonesia

Maria I. Lusida[1,4], Surayah[2], Hiroshi Sakugawa[6], Motoko Nagano-Fujii[7], Soetjipto[2,4], Mulyanto[5], Retno Handajani[2,4], Boediwarsono[3], Poernomo B. Setiawan[3], Chairul A. Nidom[2,4], Shinji Ohgimoto[7], and Hak Hotta*[,7]

Departments of [1]*Microbiology,* [2]*Biochemistry, and* [3]*Internal Medicine, Faculty of Medicine & Dr. Soetomo Hospital,* [4]*Tropical Disease Center, Airlangga University, Surabaya, Indonesia,* [5]*West Nusa Tenggara Hepatitis Laboratory, Mataram, Indonesia,* [6]*First Department of Internal Medicine, University of the Ryukyus School of Medicine, Okinawa 903–0215, Japan, and* [7]*Department of Microbiology, Kobe University Graduate School of Medicine, Kobe, Hyogo 650–0017, Japan*

Also, molecular virological study on HCV was conducted by Dr. Rachmat Hidajat, who came to Kobe through the Monbusho scholarship program to obtain his PhD from Kobe University. He found interaction of the HCV NS3 protein with a novel family of host proteins, ELKS-δ and ELKS-α, which are involved in intracellular transport and secretary pathways. This study has been published in *Journal of General Virology*in 2005.

Journal of General Virology (2005), 86, 2197–2208

Hepatitis C virus NS3 protein interacts with ELKS-δ and ELKS-α, members of a novel protein family involved in intracellular transport and secretory pathways

Rachmat Hidajat,[1] Motoko Nagano-Fujii,[1] Lin Deng,[1] Motofumi Tanaka,[1,2] Yuki Takigawa,[1] Sohei Kitazawa[3] and Hak Hotta[1]

5. "Collaborative Research Center for Emerging and Re-emerging Infectious Diseases (CRC-ERID)" and "Japan Initiative for Global Research Network on Infectious Diseases (J-GRID)" supported by MEXT (2007 – Present)

In 2007, the International Center for Medical Research (ICMR), Kobe University School of Medicine, was appointed by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan, as the principal institution for an overseas research center

in Indonesia, and established the Collaborative Research Center for Emerging and Re-emerging Infectious Diseases (CRC-ERID) in the Institute of Tropical Disease (ITD), formally called TDC, in Universitas Airlangga, with new Biosafety Level 3 (BSL3) facilities established. Major research topics in CRC-ERID were H5N1 highly pathogenic avian influenza, viral hepatitis B, C and E, dengue and dengue hemorrhagic fever, and infectious diarrhea.

In the first couple of years, as the leaders of the project, Prof. Yoes Prijatna Dachlan and I, backed up by Prof. Fasich, Rector of Universitas Airlangga, made our efforts to have this project accepted by MEXT, have CRC-ERID with BSL3 facilities get established and have the collaborative research projects get started smoothly and efficiently.

Also, as the principal investigators of the virus hepatitis research group, Prof. Soetjipto, Prof. Maria Inge Lusida, Dr. Takako Utsumi, Prof. Yoshitake Hayashi and I conducted molecular and sero-epidemiologic studies on HBV, HCV and HDV in Papua, Indonesia, and found novel subgenotypes of HBV. The interesting results have been published in *Journal of Clinical Microbiology* in 2008, 2009 and thereafter.

JOURNAL OF CLINICAL MICROBIOLOGY, July 2008, p. 2160–2166 Vol. 46, No. 7
0095-1137/08/$08.00+0 doi:10.1128/JCM.01681-07

Novel Subgenotypes of Hepatitis B Virus Genotypes C and D in Papua, Indonesia[▽]

Maria Inge Lusida,[1,4]† Victor Eka Nugrahaputra,[2]† Soetjipto,[3,4] Retno Handajani,[3,4] Motoko Nagano-Fujii,[5] Mikiko Sasayama,[6] Takako Utsumi,[6] and Hak Hotta[5,6]*

Departments of Microbiology[1] and Biochemistry,[3] Faculty of Medicine, and Tropical Disease Center,[4] Airlangga University, Surabaya, Indonesia; Department of Microbiology, Cenderawasih University School of Medicine, Jayapura, Indonesia[2]; and Division of Microbiology[5] and International Center for Medical Research and Treatment,[6] Kobe University Graduate School of Medicine, Kobe, Hyogo 650-0017, Japan

JOURNAL OF CLINICAL MICROBIOLOGY, June 2009, p. 1842–1847 Vol. 47, No. 6
0095-1137/09/$08.00+0 doi:10.1128/JCM.02328-08

Complete Genome Sequence and Phylogenetic Relatedness of Hepatitis B Virus Isolates in Papua, Indonesia[▽]†

Takako Utsumi,[1,6] Maria Inge Lusida,[1,2] Yoshihiko Yano,[6] Victor Eka Nugrahaputra,[4] Mochamad Amin,[1] Juniastuti,[2] Soetjipto,[1,3] Yoshitake Hayashi,[5,6] and Hak Hotta[5,6]*

Indonesia-Japan Collaborative Research Center for Emerging and Re-emerging Infectious Diseases, Institute of Tropical Disease, Airlangga University, Surabaya, Indonesia[1]; Departments of Microbiology[2] and Biochemistry,[3] Faculty of Medicine, Airlangga University, Surabaya, Indonesia; Department of Microbiology, Cenderawasih University School of Medicine, Jayapura, Indonesia[4]; and Department of Microbiology and Infectious Diseases[5] and Center for Infectious Diseases,[6] Kobe University Graduate School of Medicine, Kobe 650-0017, Japan

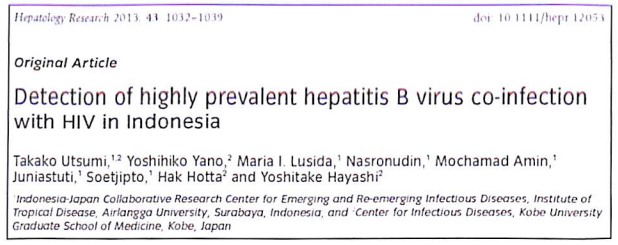
Since 2010, the CRC-ERID project has been extended to the second phase of the project, called the Japan Initiative for Global Research Network on Infectious Diseases (J-GRID). We continue the collaborative research on H5N1 avian influenza and other respiratory infections, viral hepatitis B, C and E, dengue and dengue hemorrhagic fever, HIV/AIDS and infectious diarrhea. I am now in charge of H5N1 avian influenza and other respiratory infections, along with viral hepatitis B, C and E. The viral hepatitis research group has published on a continuing basis excellent achievements on molecular and sero-epidemiologic characteristics of HBV, HCV and HEV in international journals, such as *Journal of Clinical Microbiology*, *Journal of Medical Virology* and *Archives of Virology*. Some of the examples are shown below.

Journal of Medical Virology 83:225–234 (2011)

Another Novel Subgenotype of Hepatitis B Virus Genotype C From Papuans of Highland Origin

Juniastuti,[1,2] Takako Utsumi,[2,3] Victor Eka Nugrahaputra,[4] Mochamad Amin,[2] Soetjipto,[2,5] Yoshitake Hayashi,[3] Hak Hotta,[3] and Maria Inge Lusida[1,2]*

[1]Department of Microbiology, School of Medicine, Airlangga University, Surabaya, Indonesia
[2]Indonesia-Japan Collaborative Research Center for Emerging and Re-emerging Infectious Diseases, Institute of Tropical Disease, Airlangga University, Surabaya, Indonesia
[3]Center for Infectious Diseases, Kobe University Graduate School of Medicine, Kobe, Japan
[4]Department of Microbiology, School of Medicine, Cendrawasih University, Jayapura, Indonesia
[5]Department of Biochemistry, School of Medicine, Airlangga University, Surabaya, Indonesia

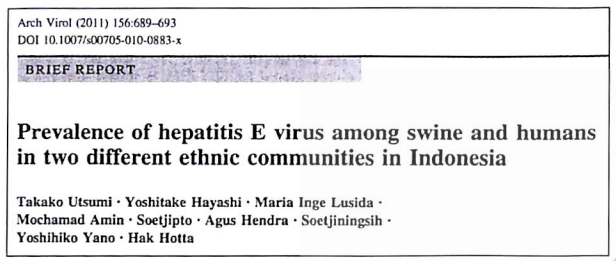

Hepatology Research 2013; 43: 1032–1039 doi: 10.1111/hepr.12054

Original Article

Detection of highly prevalent hepatitis B virus co-infection with HIV in Indonesia

Takako Utsumi,[1,2] Yoshihiko Yano,[2] Maria I. Lusida,[1] Nasronudin,[1] Mochamad Amin,[1] Juniastuti,[1] Soetjipto,[1] Hak Hotta[2] and Yoshitake Hayashi[2]

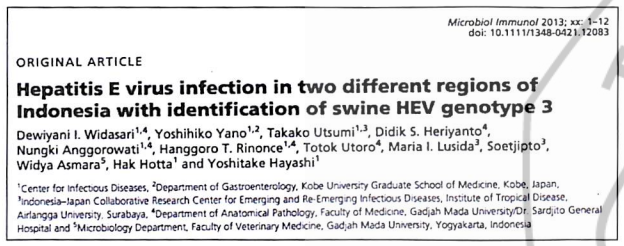
[1]Indonesia-Japan Collaborative Research Center for Emerging and Re-emerging Infectious Diseases, Institute of Tropical Disease, Airlangga University, Surabaya, Indonesia, and [2]Center for Infectious Diseases, Kobe University Graduate School of Medicine, Kobe, Japan


Arch Virol (2011) 156:689–693
DOI 10.1007/s00705-010-0883-x

BRIEF REPORT

Prevalence of hepatitis E virus among swine and humans in two different ethnic communities in Indonesia

Takako Utsumi · Yoshitake Hayashi · Maria Inge Lusida · Mochamad Amin · Soetjipto · Agus Hendra · Soetjiningsih · Yoshihiko Yano · Hak Hotta


Microbiol Immunol 2013; xx: 1–12
doi: 10.1111/1348-0421.12083

ORIGINAL ARTICLE

Hepatitis E virus infection in two different regions of Indonesia with identification of swine HEV genotype 3

Dewiyani I. Widasari[1,4], Yoshihiko Yano[1,2], Takako Utsumi[1,3], Didik S. Heriyanto[4], Nungki Anggorowati[1,4], Hanggoro T. Rinonce[1,4], Totok Utoro[4], Maria I. Lusida[3], Soetjipto[3], Widya Asmara[5], Hak Hotta[1] and Yoshitake Hayashi[1]

[1]Center for Infectious Diseases, [2]Department of Gastroenterology, Kobe University Graduate School of Medicine, Kobe, Japan, [3]Indonesia–Japan Collaborative Research Center for Emerging and Re-Emerging Infectious Diseases, Institute of Tropical Disease, Airlangga University, Surabaya, [4]Department of Anatomical Pathology, Faculty of Medicine, Gadjah Mada University/Dr. Sardjito General Hospital and [5]Microbiology Department, Faculty of Veterinary Medicine, Gadjah Mada University, Yogyakarta, Indonesia

6. "SATREPS"supported by JICA and JST (2009 – 2014)

Since 2009, the International Center for Medical Research (ICMR), Kobe University School of Medicine, has been reorganized and renamed as the Center for Infectious Diseases (CID).

In the same year, my colleagues and I, myself serving as the Director of CID, started another international collaborative research project, called "Science and Technology Research Partnership for Sustainable Development (SATREPS)", supported by the Japan International Cooperation Agency (JICA) and the Japan Science and Technology Agency (JST), with Universitas Indonesia being the principal institution and Universitas Airlangga the cooperating institution in Indonesia. Prof. Soetjipto, Prof. Maria Inge, Dr. Ahmad Fuad, Dr. Aty Widyawaruyanti participated in this project. The title of the project was "Identification of anti-hepatitis C virus (HCV) substances and development of HCV and dengue vaccines". We set up a phytochemistry laboratory in the Institute of Tropical Disease (ITD) with advanced equipment, such as nuclear magnetic resonance (NMR) apparatus, liquid chromatography–mass spectrometry (LC-MS), high performance liquid chromatography (HPLC) and thin layer chromatography (TLC) visualizer, supported by JICA.

In 2012, the Minister of Research and Technology (RISTEK), Prof. Dr. Ir. Gusti Mohamad Hatta, and the Secretary of State, Republic of Indonesia, stopped by at the SATREPS laboratory to hear about the SATREPS activities during their official visit to ITD, Universitas Airlangga.

By using the advanced research facilities, we successfully identified a number of anti-HCV compounds from Indonesian medicinal plants at ITD as well as from Japanese medicinal plants in Kobe. Some of the results have been published in international journals, such as *Virology Journal* and *Microbiology and Immunology*, with brilliant young Indonesian researchers being the first authors. It

is noteworthy that Dr. Myrna Adianti obtained her Ph.D. from Kobe University in 2014 and that Ms. Tutik Sri Wahyuni will follow soon.

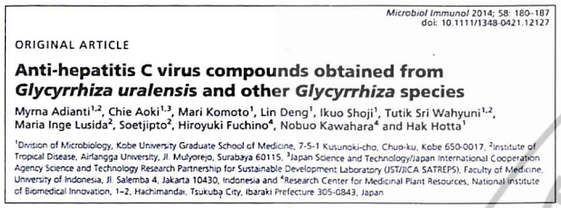
Wahyuni et al. Virology Journal 2013, 10:259
http://www.virologyj.com/content/10/1/259

VIROLOGY JOURNAL

RESEARCH Open Access

Antiviral activities of Indonesian medicinal plants in the East Java region against hepatitis C virus

Tutik Sri Wahyuni[1,3], Lydia Tumewu[2], Adita Ayu Permanasari[2], Evhy Apriani[2], Myrna Adianti[2,3], Abdul Rahman[1], Aty Widyawaruyanti[1], Maria Inge Lusida[2], Achmad Fuad[1], Soetjipto[2], Nasronudin[2], Hiroyuki Fuchino[4], Nobuo Kawahara[4], Ikuo Shoji[3], Lin Deng[3], Chie Aoki[3,5] and Hak Hotta[3*]



Microbiol Immunol 2014; 58: 180–187
doi: 10.1111/1348-0421.12127

ORIGINAL ARTICLE

Anti-hepatitis C virus compounds obtained from *Glycyrrhiza uralensis* and other *Glycyrrhiza* species

Myrna Adianti[1,2], Chie Aoki[1,3], Mari Komoto[1], Lin Deng[1], Ikuo Shoji[1], Tutik Sri Wahyuni[1,2], Maria Inge Lusida[2], Soetjipto[2], Hiroyuki Fuchino[4], Nobuo Kawahara[4] and Hak Hotta[1]

[1]Division of Microbiology, Kobe University Graduate School of Medicine, 7-5-1 Kusunoki-cho, Chuo-ku, Kobe 650-0017, [2]Institute of Tropical Disease, Airlangga University, Jl. Mulyorejo, Surabaya 60115, [3]Japan Science and Technology/Japan International Cooperation Agency Science and Technology Research Partnership for Sustainable Development Laboratory (JST/JICA SATREPS), Faculty of Medicine, University of Indonesia, Jl. Salemba 4, Jakarta 10430, Indonesia and [4]Research Center for Medicinal Plant Resources, National Institute of Biomedical Innovation, 1–2, Hachimandai, Tsukuba City, Ibaraki Prefecture 305-0843, Japan

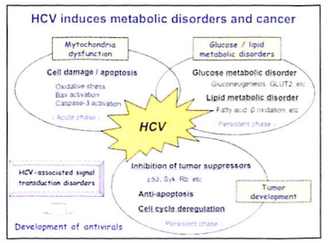
7. Re-Inventing Japan Project supported by MEXT and JSPS (2012 – Present)

In 2012, Graduate School of Medicine and Graduate School of Health Sciences, Kobe University, in collaboration with Osaka University, launched a new education program, called "Education of Global Medical and Health Science Leaders in the Coming Generation in Cooperation and Collaboration with ASEAN Countries", under the scheme of "Support for the Formation of Collaborative Education Programs with ASEAN Universities" in the "Re-Inventing Japan Project", supported by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Japan Society for the Promotion of Science (JSPS).

Under this collaborative education program, Kobe University and top universities in Indonesia, such as Universitas Airlangga, Universitas Indonesia and Universitas Gadjah Mada, exchange students at both undergraduate and graduate levels to nurture possible global leaders in the next generation. As the former Vice Dean of Graduate School of Medicine, I have been in charge of this project in collaboration with Deans and Vice Deans of the counterpart universities.

8. Other scientific achievements conducted in parallel with our collaboration

1) HCV pathogenesis – metabolic disorders, apoptosis/anti-apoptosis and carcinogenesis
   - Matsui et al., *J Virol*, 86: 12903-12911, 2012.
   - Deng et al., *J Virol*. 85: 8556-8568,2011.
   - Mohd-Ismail et al. *J Virol*, 83: 9993-10006, 2009.
   - Amako et al., *J Virol*, 83: 9237-9246, 2009.
   - Kasai et al., *J Hepatol*, 50: 883-894, 2009.
   - Bungyoku et al., *J Gen Virol*, 90: 1681-1691, 2009.
   - Deng et al., *J Virol*, 82: 10375-10385, 2008.
   - Inubushi et al., *J Gen Virol*, 89: 1231-1242, 2008.
   - Deng et al., *J Gen Virol*, 87: 1703-1713, 2006.
   - Nomura-Takigawa et al., *J Gen Virol*, 87: 1935-1945, 2006.
2) HCV heterogeneity associated with interferon resistance
   - El-Shamy et al., *J Clin Microbiol*, 50: 3886-3892, 2012.
   - El-Shamy et al., *PLoS ONE*, 7; e30513. 2012.
   - Kim et al., *J Gastroenterol*, 47: 1143-51, 2012.
   - Sanjo et al.,*J Med Virol*, 82: 1364-1370, 2010.
   - El-Shamy et al., *Hepatology*, 48: 38-47, 2008.



- Taguchi et al., *J Gen Virol*, 85: 959-969, 2004.

3) HCV heterogeneity associated with hepatoma development
   - El-Shamy et al., *Hepatology,* 58: 555-563, 2013.
   - Nishise et al., *J Infect Dis*, 196: 1006-1009, 2007.
   - Ogata et al.,*J Clin Microbiol*, 41: 2835-2841, 2003.
   - Ogata et al., *J Clin Microbiol*, 40: 3625-3630, 2002.

4) HCV vaccines and antibodies
   - Takei et al., *Vaccine*, 32: 3066-3074. 2014
   - Ratnoglik et al., P*LoS ONE*, 9: e98877, 2014.
   - Shimizu et al., *PLoS ONE*, 8:e55874, 2013.
   - Sasayama et al., *J Med Virol*, 84: 229-234. 2012.

9. Acknowledgements

As stated above, Kobe University Graduate School of Medicine has been collaborating with Universitas Airlangga through a variety of projects supported by MEXT, JSPS, JST and JICA in medical and health science research and education for nearly 50 years. I myself also have been involved in the collaboration for more than 25 years with great happiness and sense of fulfillment. On this occasion, I would like to express, once again, my sincerest gratitude to all of my mentors, colleagues and friends in Indonesia, especially, Prof. Dr. H. Fasich, the Rector of Universitas Airlangga, Prof. Soetjipto, Vice Rector, and Prof. Nasronudin, Director of the Institute of Tropical Disease, Universitas Airlangga.

Thank you very much and Terima kasih !!

Presentation by Director of ITD, Universitas Airlangga

The Supports of ITD To "Research Excellence Program" of Universitas Airlangga: Kobe University Contributions

Dr. Nasronudin, dr., Sp.PD., K-PTI., FINASIM
Professor, Director of Institute of Tropical Disease
Universitas Airlangga

Bismillahirokhmanirokhim
Assalamu'alaikum wr wb
Excellency Counsel General of Japan in Surabaya
Honorable: Rector and Vice Rectors of Universitas Airlangga
Honorable: Chairman of Academic Senate of Universitas Airlangga
Dean Faculty of Medicine; all deans and vice deans of all faculties, and all chairmen of institutes in Universitas Airlangga.
All Professors, seniors, Lecturers and Researchers
All Heads of Departments in Faculty of Medicine
All Directors of Hospitals and Civitas Academica Universitas Airlangga.
Honorable Prof. Hak Hotta, Distinguished guest Prof. Yoshitake Hayashi from Kobe University.

Ladies and Gentlemen,

First of all, I would like to express my gratitude to Allah the Almighty, that we could attend this ceremony in good health.

Today, we are all here for an important event, the official inauguration of Prof. Hak Hotta as Honorary Professor of Universitas Airlangga.

In this good opportunity, I would like to introduce Institute of Tropical Disease (ITD) Universitas Airlangga in its recent condition, which is historically has close relationship with Kobe University.

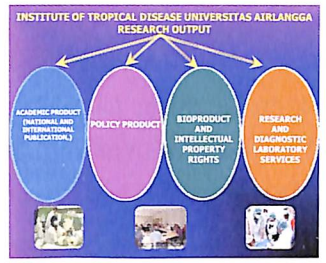
The research institute was originally named Tropical Disease Research Center (TDRC), housed in Medical Faculty of Universitas Airlangga Campus A, initially chaired by Prof. I Gede Ranuh.

Then the research institute name was changed into Tropical Disease Center (TDC), and moved to Universitas Airlangga Campus C, chaired by Prof. Yoes Priyatna Dahlan.

The research institute's name became Institute of Tropical Disease (ITD) since January 2008. By this, the level of ITD is increased from previously a unit to become the same level as Faculties in Universitas Airlangga.

ITD is one of the research centers in Indonesia. It supports the most research activities for Universitas Airlangga. Researches in ITD are mainly on Health and Medical Biotechnology, but the researchers come from several faculties, majoring not only natural sciences, but also social and humanities. The studies are based not only on genomic, proteomic and stem cell, but also on eco-socio-cultural approaches.

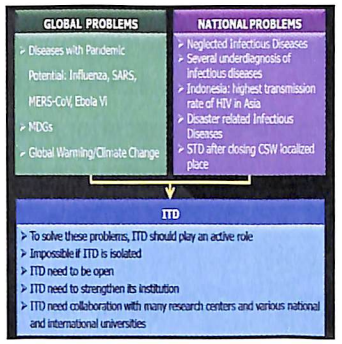
Based on research outputs, our products can be categorized as: 1) Academic products, including national and international publications, and intelectual property rights. 2) Policy products, which are important to support Indonesian government. 3) Bioproducts, which are important for the Indonesian people; and 4) Laboratory services, including diagnostic and research services.



Ladies and Gentlemen,

Currently we are facing global problems related with infectious diseases, such as

- diseases with pandemic potential, including Influenza, SARS, MERS-CoV and Ebola,
- diseases related with Climate Change or Global Warming, and also
- MDGs.

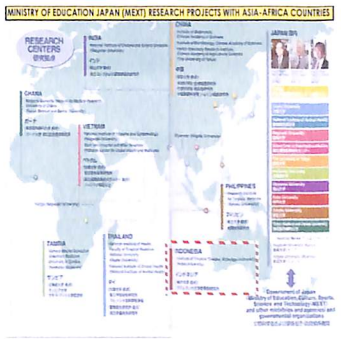


We are also facing national problems, such as Neglected Infectious Diseases, several underdiagnosis of Infectious Diseases, highest transmission rates of HIV among Asian countries, infectious diseases related with disaster, and awareness to the possible spreading of STD after the closure of CSW localized area.

To solve these problems, ITD should play an active role. It is impossible if ITD works in itself. We need to be open, strengthen our institution by collaboration and networking with many research centers and various national and international universities, government and non government institutions.

Ladies and Gentlemen,

Since 2007 Ministry of Education, Culture, Science, Sports, and Technology (MEXT) Japan, through J-GRID (Japan Initiative for Global Research Network on Infectious Diseases) initiate collaborations among Japanese Universities/ Institutions



and several universities in Asia and Africa Countries, which one of them between Kobe university and Universitas Airlangga. We have been passing two terms successfully, under the guidance of Prof. Yoshitake Hayashi, and will continue into the third term until 2019. Many publications and health policy products have been resulted. Right now there are three long-time researchers staying and doing researches together with our staffs, i.e. Prof. Kazufumi Shimizu, Ph.D., Dr. Takako Utsumi, and Mr. Tomohiro Kotaki, MSc.

Besides, Kobe University and Universitas Airlangga has been granted a prestigious project supported by JICA-JST (Japan Science and Technology), named: SATREPS (Science and Technology Research Partnership for Sustainable Development) on medicinal plants.

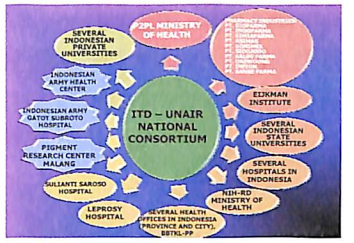
In Indonesia, it is only Universitas Airlangga that received such big two projects from the government of Japan at the same time. This could be achieved with the role of Prof. Hotta in convincing MEXT and JICA-JST Committee. For this, we are grateful to Prof. Hotta.

The collaboration between Kobe University and Universitas Airlangga has increased research activities, including research facilities, and also human resource development in Universitas Airlangga. Several Universitas Airlangga researchers have taken opportunities as exchange scientists, PhD students or post doctoral fellows in Kobe University. Many research facilities have been granted, and one of them is nuclear magnetic resonance (NMR). So, on behalf of ITD, once again I would like to thank Prof. Hak Hotta for the uninterrupted support to ITD.

Kobe University gave significant contribution in strengthening ITD as research institute, increasing research activities and developing human resources. With the supports from our national and international collaborators, and also from all of UNAIR civitas

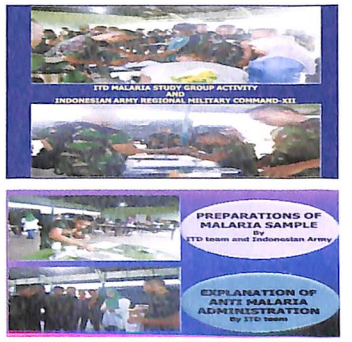
academica, ITD has been awarded as Center of Excellence in Health, Medicine and Molecular Biology by Ministry of Research and Technology of The Republic of Indonesia in December 2012. Then, in August 2013, ITD received Prayogasala Award in front of President of Indonesia after accredited certification of its research and development laboratories.

From now on, ITD continue increasing its research activities by making collaboration and networking with several institutions in the national and international level. This slide shows our collaboration with several national institutions, including several pharmaceutical industries for the further development of our bioproducts.

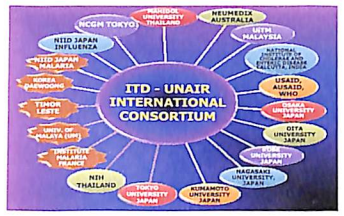


Indonesia is a big country with 247 million people. Indonesia consists of 17 thousand islands, with 303 ethnic groups of people who live in as many as seventeen thousand islands, spreading from Aceh to Papua province. This may relate to disease variations, therapy responses, and possibly vaccination results. These are interesting to be explored. Our good collaboration with Kobe University has solved parts of these problems.

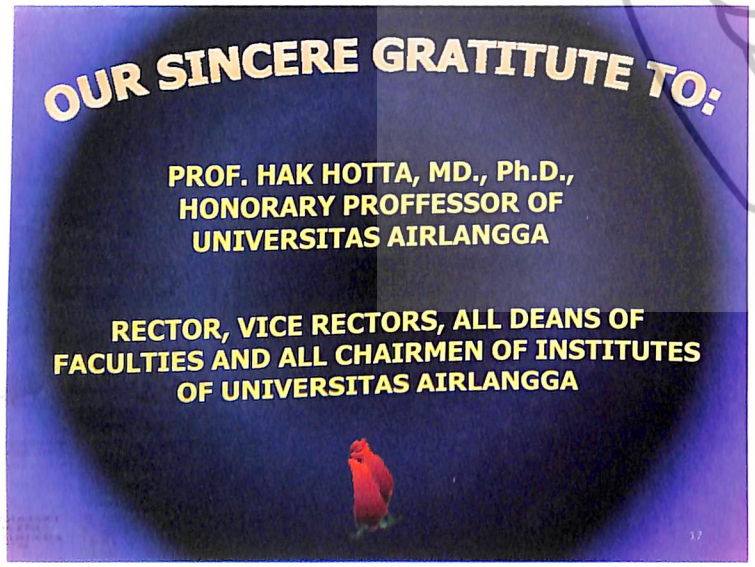
These two pictures show one of our activities, clinical study of therapy of malaria, in collaboration with Indonesian Army Gatot Subroto Hospital and Indonesian Army Health Center.



This picture shows our international collaborators. Collaboration with Japan is still very important, especially Kobe University as principle collaborator. Professor Hak Hotta and Kobe University play an important role in establishing ITD's collaborations with several institutions in Japan.



In this opportunity, we would like to inform that this year Universitas Airlangga achieves 200 TOP RANKS ASIAN UNIVERSITIES, 3 TOP RANKS OF INDONESIAN UNIVERSITIES, and HIGHEST IN CITATION INDEX IN ASIA. These achievements are unquestionably resulted from the supports of all civitas academica from all faculties of Universitas Airlangga; and surely supports of ITD along with contributions of Kobe University through CRC-ERID and SATREPS projects.



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Kobe University Graduate School of Medicine
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Tel +81-78-382-5500; Fax +81-78-382-5519
Email: hotta@kobe-u.ac.jp; hotta@med.kobe-u.ac.jp

Date of Birth: October 21, 1949

Education

M.D., 1974, School of Medicine, Osaka University
Ph.D., 1985, Kobe University Graduate School of Medicine

Professional Career

1974-1975:	Physician (Internal Medicine), Osaka University Hospital
1975-1977:	Physician (Internal Medicine), Hyogo Prefectural Nishinomiya Hospital
1977-1986:	Research Associate (Microbiology), Kobe University School of Medicine
1986-1987:	Visiting Scholar, Wistar Institute, Philadelphia, PA, U. S. A.
1988-1994:	Associate Professor (Microbiology), Kobe University School of Medicine
1994-2000:	Professor (Microbiology), Kobe University School of Medicine
2001-Present	Professor (Microbiology), Kobe University Graduate School of Medicine

Concurrent Positions at Kobe University

1995-1998: Director, Institute for Experimental Animals, School of Medicine

1998-2002: Director, International Center for Medical Research (ICMR), School of Medicine

2003-2005: Director, International Student Center, Kobe University (KISC)

2006-2009: Director, International Center for Medical Research and Treatment (ICMRT)
Kobe University Graduate School of Medicine

2009-2011: Director, Center for Infectious Diseases (CID), Kobe University Graduate School of Medicine

2011-2013: Vice Dean, Kobe University Graduate School of Medicine

Collaborative Research & Education Projects with Universitas Airlangga

1991-1993: Project leader, JICA Tropical Disease Control Project
Start-up of Tropical Disease Research Center (TDRC), including PCR apparatus, at FK-UNAIR and collaborative research activities.

1991-1997: Project member, JSPS Large Scale Collaborative Research (TDRC-UNAIR and Kobe University) with Thailand, the Philippines and Singapore.

1998-2002: Project leader, JSPS Large Scale Collaborative Research.
Start-up of research facilities in Tropical Disease Center (TDC), including PCR apparatus and sequence analyzer, and collaborative research activities.

2007-2009: Project leader, MEXT/JST Foundation of Research Centers for Emerging and Re-emerging Infectious Diseases.
Start-up of Collaborative Research Center for Emerging and Re-emerging Infectious Diseases (CRC-ERID) at Institute of Tropical Disease (ITD), including BSL3 facilities, and collaborative research activities at CRC-ERID, ITD, UNAIR.

2009-2013: Project leader, JICA/JST Science and Technology Research Partnership for Sustainable Development (SATREPS). "Identification of Anti-Hepatitis C Virus (HCV) Substances and Development of HCV and Dengue Vaccines"
Start-up of SATREPS Collaborative Research at ITD, including NMR, LC-MS, HPLC and phytochemistry/ virology laboratories, and collaborative research activities at ITD, UNAIR.

2010-2014: Project co-leader, MEXT/JST Japan Initiative for Global Research Network on Infectious Diseases.
Renewal of research equipment, including sequence analyzer, and collaborative research activities at CRC-ERID, ITD, UNAIR.

2012-: Project leader, MEXT/JSPS Re-Inventing Japan Project on Cooperative Education with UNAIR, UI, UGM, Mahidol University, Chiang Mai University, Osaka University and Kobe University. "Education of Global Medical and Health Science Leaders in the Coming Generation in Cooperation and Collaboration with ASEAN Countries"

Grants-in-Aid for Collaborative Research with UNAIR from Ministry of Education (MEXT), Japan

1993-1996 "Study on hepatitis C virus in Indonesia and Southeast Asian countries"

1998-2002 "Study on hepatitis viruses in Indonesia and Southeast Asian countries"

2004-2005 "Study on hepatitis B and C viruses in Indonesia"

Academic Advisor for UNAIR Staff Studying Abroad at Kobe University (Selected)

1991	Dra. Marijam Purwanta (JICA; 4 months)
1992	Dr. Maria Inge Lusida (JICA; 6 months)
	Dr. Ni Made Martaniasi (JICA; 6 months)
1997:	Dr. Chairul Anwar Nidom (JSPS; 8 months)
1998:	Dr. Bimo Heurpradoto Aksono (JSPS; 8 months)
1999:	Dr. Rachmat Hidajat (JSPS; 8 months)

Academic Advisor for UNAIR Members for Ph.D. degree from Kobe University

1997:	Vice Rector Prof. Soetjipto, Ph.D. (Hepatitis C virus epidemiology)
2000:	Prof. Retno Handajani, Ph.D. (GB virus and hepatitis C virus epidemiology)
2002:	Prof. Maria Inge Lusida, Ph.D. (Hepatitis C and B viruses epidemiology)
2005:	Dr. Rachmat Hidajat, Ph.D. (Hepatitis C virus molecular biology)
2014:	Dr. Myrna Adianti, Ph.D. (Antivirals against hepatitis C virus)

Other Professional Career (s) in Indonesia

2012 - Present	Adjunct Professor, Universitas Indonesia

Awards

2009:	APSMV Excellence Award (Asia-Pacific Society for Medical Virology)

Academic Activities

Japanese Society for Virology (JSV); (President, The 61st Annual Meeting of JSV, 2013)
The Japan Society of Hepatology

Japanese Society for Bacteriology
Japanese Society for Immunology
Japanese Cancer Association
American Society for Microbiology (ASM)
American Association for the Advancement of Science (AAAS)
Asia-Pacific Society of Medical Virology (APSMV)

Selected List of Publications (Papers in collaboration with UNAIR all included)

1. El-Shamy A, Hotta H. Impact of hepatitis C virus heterogeneity on interferon sensitivity: An overview. *World J Gastroenterol*, 20: 7555-7569, 2014.
2. Utsumi T, Yano Y, Hotta H. Molecular epidemiology of hepatitis B virus in Asia. *World J Med Genet*, 4: 19-26, 2014.
3. Juniastuti, Wibowo BP, Wibawa IDN, Utsumi T, Mustika S, Amin M, Wahyuni RM, Kurniawan H, Hendrayana A, Setiawan PB, Yamani LN, Soetjipto, Yano Y, Hotta H, Hayashi Y, Lusida MI. Analysis of interleukin-28B polymorphisms and pegylated-interferon/ribavirin response of Indonesian chronic hepatitis C. *J Clin Microbiol*, 52: 2193-2195, 2014.
4. Juniastuti, Utsumi T, Nasronudin, Alimsardjono L, Amin M, Adianti M, Yano Y, Soetjipto, Hayashi Y, Hotta H, Lusida MI. High rate of seronegative HCV infection in HIV-positive patients. *Biomed Rep*, 2: 79-84, 2014.
5. Bai F, Yano Y, Kim SR, Seo Y, Miki A, Saito M, Hirano H, Momose K, Minami A, Hatazawa Y, Hayakumo T, Widasari DI, Rinonce HT, Sugano M, Tani S, Yoon S, Imoto S, Azuma T, Hotta H, Hayashi Y. Mutational diversity of NS5A and NS3 during triple therapy (telaprevir, pegylated-interferon-□ 2b and ribavirin) for genotype 1b chronic hepatitis C: The Kobe Hepatitis Therapeutic Group. *Int J Mol Med*, 33(6):1652-1656, 2014.

6. Adianti1 M, Aoki C, Komoto M, Deng L, Shoji I, Wahyuni1 T S, Lusida M I, Soetjipo, Fuchino H, Kawahara N, Hotta H. Anti-hepatitis C virus compounds obtained from Glycyrrhiza uralensis and other Glycyrrhiza species. *Microbiol Immunol*, 58: 180-187, 2014.
7. Ratnoglik S L, Aoki C, Sudarmono P, Komoto M, Deng L, Shoji I, Fuchino H, Kawahara N, Hotta H. Antiviral activity of extracts from *Morinda citrifolia* leaves and chlorophyll catabolites pheophorbide a and pyropheophorbide a, against hepatitis C virus. *Microbiol Immunol*, 58: 188-194, 2014.
8. Takei S, Omoto C, Kitagawa K, Morishita N, Katayama T, Shigemura K, Fujisawa M, Kawabata M, Hotta H, Shirakawa T. Oral administration of genetically modified Bifidobacterium displaying HCV-NS3 multi-epitope fusion protein could induce an HCV-NS3-specific systemic immune response in mice. *Vaccine*, 32: 3066-3074. 2014.
9. Ratnoglik SL, Jiang DP, Aoki C, Sudarmono P, Shoji I, Deng L, Hotta H. Induction of cell-mediated immune responses in mice by DNA vaccines that express hepatitis C virus NS3 mutants lacking serine protease and NTPase/RNA helicase activities. *PLoS ONE*, 9(6): e98877, 2014.
10. Rinonce HT, Yano Y, Utsumi T, Heriyanto DS, Anggorowati N, Widasari DI, Lusida MI, Soetjipto, Prasanto H, Hotta H, Hayashi Y.Hepatitis B and C virus infection among hemodialysis patients in yogyakarta, Indonesia: Prevalence and molecular evidence for nosocomial transmission. *J Med Virol*. 5: 1348-1361, 2013.
11. Widasari DI, Yano Y, Utsumi T, Heriyanto DS, Anggorowati N, Rinonce HT, Utoro T, Lusida MI, Soetjipto, Asmara W, Hotta H, Hayashi Y. Hepatitis E virus infection in two different regions of Indonesia with identification of swine HEV genotype 3. *Microbiol Immunol*, 57: 692-703, 2013.

12. Wahyuni TS, Tumewu L, Permanasari AA, Apriani E, Adianti M, Rahman A, Widyawaruyanti A, Lusida MI, Fuad A, Soetjipto, Nasronudin, Fuchino H, Kawahara N, Shoji I, Deng L, Aoki C, Hotta H. Antiviral activities of Indonesian medicinal plants in the East Java region against hepatitis C virus. *Virol J*, 10: 259, 2013.
13. Shimizu YK, Hijikata M, Oshima M, Shimizu K, Alter HJ, Purcell RH, Yoshikura H, Hotta H. Isolation of human monoclonal antibodies to the envelope E2 protein of hepatitis C virus and their characterization. PLoS ONE, 8(2):e55874, 2013.
14. Utsumi T, Yano Y, Lusida MI, Nasronudin, Amin M, Juniastuti, Soetjipto, Hotta H, Hayashi Y.Detection of highly prevalent hepatitis B virus co-infection with HIV in Indonesia. *Hepatol Res*, 43: 1032-1039, 2013.
15. El-Shamy A, Shindo M, Shoji I, Deng L, Okuno T, Hotta H. Polymorphisms of the core, NS3 and NS5A proteins of hepatitis C virus genotype 1b associate with development of hepatocellular carcinoma. *Hepatology*, 58: 555-563, 2013.
16. Matsui C, Shoji I, Kaneda S, Sianipar IR, Deng L, Hotta H. Hepatitis C virus infection suppresses GLUT2 gene expression via down-regulation of hepatocyte nuclear factor 1α. *J Virol*, 86: 12903-12911, 2012.
17. El-Shamy A, Shoji I, El-Akel W, Bilasy SE, Deng L, El-Raziky M, Jiang DP, Esmat G, Hotta H. NS5A sequence heterogeneity of hepatitis C virus genotype 4a predicts clinical outcome of pegylated-interferon/ribavirin therapy in Egyptian patients. *J Clin Microbiol*, 50: 3886-3892, 2012.
18. Nakashima K, Takeuchi K, Chihara K, Horiguchi T, Sun X, Deng L, Shoji I, Hotta H, Sada K. HCV NS5A protein containing potential ligands for both Src homology 2 and 3 domains enhances autophosphorylation of Src family kinase Fyn in B cells. *PLoS ONE*, 7: e46634, 2012.

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