The 45th Annual Japan-U.S. Joint Conference on Parasitic Diseases

Japan-U.S. Parasitic Diseases Panel Meeting

Japan-U.S. Cooperative Medical Science Program

National Institute of Infectious Diseases
Tokyo, Japan
January 10-11, 2011
Monday, January 10th

10:00 Welcome
Tomoyoshi Nozaki, Organizer of the 45th Japan-U.S. Joint Conference
Opening remarks
Kenji Hirayama, Japanese Panel Chair
James Kazura, U.S. Panel Chair

10:10 The Japan-U.S. Panel on Parasitic Diseases
Malla R. Rao, National Institutes of Health, U.S.A. and Kenji Hirayama,
Nagasaki University

[Schistosoma and Helminth-1] Chairs: Dan Colley and Kenji Hirayama

10:25 SCORE – Comparative studies on how to control and eliminate
Schistosoma mansoni and S. haematobium
Daniel G. Colley, University of Georgia, U.S.A.

10:43 Expression and kinetics feature of thioredoxin glutathione
reductase of Schistosoma japonicum
Chuanxin Yu, Jiangsu Institute of Parasitic Diseases, China

11:01 Studies on the potential drug target Sj ANT and discovery of the
compounds against Schistosoma japonicum in vitro
Hu Wei, Chinese Center for Disease Control and Prevention, China

11:19 Immunogenetic analysis of the patients with early onset
schistosomal fibrosis in Sorsogon Province, the Philippines
Kenji Hirayama, Nagasaki University, Japan

11:32 Surveys on newly found schistosomiasis endemic foci in
Southeast Asian countries
Hiroshi Ohmae, National Institute of Infectious Diseases, Japan

11:45 Regulation of hepatic granuloma formation by IL-4/IL-13 in S.
japonicum infected mice
Takenori Seki, Tokyo Medical and Dental University, Japan
11:58 Current situation of Angiostrongylus cantonensis and angiostrongyliasis in Japan: from geographic distribution to genotype diversity
Toshihiro Tokiwa, Tokyo Medical and Dental University, Japan

12:11 Genome and transcriptome sequencing of Strongyloides venezuelensis, an animal parasitic nematode
Eiji Nagayasu, University of Miyazaki, Japan

12:24 Pathogenesis of liver fluke-induced cholangiocarcinoma: an update
Banchob Sripa, Khon Kaen University, Thailand

12:42 LUNCH

[Malaria-1] Chairs: James W. Kazura and Taka Tsuboi

14:00 Plasmodium vivax subtelomeric transmembrane protein (PvSTP) localized at the Schüffner's dots of parasite-infected erythrocytes
Osamu Kaneko, Nagasaki University, Japan

14:13 New anti-malaria strategies: Cell death and fluorescent drugs
Kevin SW Tan, National University of Singapore, Singapore

14:31 Secretion and discharge of an alien protein in the saliva produced in a transgenic mosquito, Anopheles stephensi
Hiroyuki Matsuoka, Jichi Medical University, Japan

14:44 Post-genome novel blood-stage malaria vaccine candidate discovery by wheat germ cell-free system
Takafumi Tsuboi, Ehime University, Japan

14:57 Plasmodial ortholog of Toxoplasma gondii rhoptry neck protein 3 is localized to the rhoptry body
Daisuke Ito, Ehime University, Japan

15:10 Prevention of cerebral malaria by Flt3 ligand during infection with Plasmodium berghei ANKA
Katsuyuki Yui, Nagasaki University, Japan

15:23 Progress toward the development of Plasmodium falciparum and Plasmodium vivax transmission blocking vaccines (TBV)
Nirbhay Kumar, Tulane University, U.S.A.
15:41 New antimalarial drug development research - current status of endoperoxide
Hye-Sook Kim, Okayama University, Japan

15:54 Population structure and transmission dynamics of *Plasmodium vivax* in the Republic of Korea based on microsatellite DNA
Moritoshi Iwagami, National Center for Global Health and Medicine, Japan

16:07 *In vitro* sensitivity of *Plasmodium falciparum* clinical isolates from the China-Myanmar border area to anti-malarial drugs and polymorphisms in associated genes
Zhaoqing Yang, Kunming Medical University, China

16:25 Genetic variations in Indian populations and its implications in genetic and infectious diseases
Kumarasamy Thangaraj, Centre for Cellular and Molecular Biology, India

16:43 BREAK

[Leishmania and Trypanosoma] Chair: Kiyoshi Kita

17:00 Involvement of CD4+Foxp3+ regulatory T cells in the persistent infection of *Leishmania donovani* in the liver of immunodeficiency aly/aly mice
Saruda Tiwananthagorn, Hokkaido University, Japan

17:13 Community-based intervention study using neem extract to control visceral leishmaniasis in Bangladesh
Farhana Ferdousi, University of Tsukuba, Japan

17:26 Efficacy of permethrin treated long-lasting insecticidal nets against phlebotomine sand flies
Chizu Sanjoba, The University of Tokyo, Japan

17:39 Characterization of Iron-sulfur clusters (ISC) machinery of *L. donovani* to understand the physiological role of Fe-S proteins in drug resistance
Vahab Ali, RMRIMS, India

17:57 A phylogeny of *Leishmania major* s.l. inferred from *nagt* sequences
Sambuu Gantuya, The University of Tokyo, Japan
18:10  Commonness and uniqueness of tandem repeat antigens in the trypanosomatid parasites  
Yasuyuki Goto, The University of Tokyo, Japan

18:23  Structural analysis of glycerol kinase from African human trypanosomes  
Emmanuel Oluwadare Balogun, The University of Tokyo, Japan

18:36  The crystal structure of the trypanosomal cyanide-insensitive alternative oxidase (TAO): a novel drug target for the African trypanosomiasis  
Tomoo Shiba, The University of Tokyo, Japan

18:49  Structure-based design of selective and potent 5-substituted orotate derivatives inhibitors against Trypanosoma cruzi dihydroorotate dehydrogenase  
Daniel Ken Inaoka, The University of Tokyo, Japan

19:02  Adjournment

19:10  Meeting reception  
—Cafeteria (located on the 1st floor of the building)

Tuesday, January 11th

[Amoeba and other protozoa] Chairs: William A. Petri and Tomo Nozaki

09:00  Regenerating gene (REG) 1 as a marker and mediator of intestinal injury and repair  
Kristine M. Peterson, University of Virginia, U.S.A.

09:18  Gene silencing of mitosomal proteins cause growth inhibition suggests essentiality of mitosomes in Entamoeba histolytica  
Fumika Mi-ichi, National Institute of Infectious Diseases, Japan

09:31  A study on the pathogenicity of Entamoeba moshkovskii  
Shinjiro Hamano, Nagasaki University, Japan

09:44  Structural and functional investigations on the attachment and phagocytosis of host cells by Entamoeba histolytica  
Sunando Datta, Indian Institute of Science Education and Research, India
Emerging trends in the aetiology of enteric parasites with special reference to change in Entamoeba histolytica infestation in Kolkata, India
Sandipan Ganguly, National Institute of Cholera & Enteric Diseases, India

Mechanism of trifluoromethionine resistance in Entamoeba histolytica
Gil M. Penuliar, National Institute of Infectious Diseases, Japan

Amebiasis, tropical enteropathy, and genetic susceptibility to malnutrition: A journey with a surprising waypoint
William A. Petri Jr., University of Virginia, U.S.A.

Metabolomic analysis during differentiation of enteric protozoan parasite Entamoeba into the infectious cyst stage
Ghulam Jeelani, National Institute of Infectious Diseases, Japan

Comparison of gene profiles between trophozoite and cyst of Acanthamoeba with microarray and KOG analysis
Eun-Kyung Moon, Kyungpook National University, Korea

Effects of glucose restriction on the cell cycle of Trichomonas vaginalis
Petrus Tang, Chang Gung University, Taiwan

Molecular characterization of Trichomonas vaginalis isolates in the Philippines
Windell L. Rivera, University of the Philippines, Philippines

Functional identification of end-binding 1 (EB1) protein of Giardia lamblia by complementation and interactome analyses
Soon-Jung Park, Yonsei University College of Medicine, Korea

LUNCH
[Apicomplexan parasites] Chair: Shigeyuki Kano

13:50  Spherical body protein 4 is a new serological antigen for the global detection of Babesia bovis infection in cattle
Ikuo Igarashi, Obihiro University of Agriculture and Veterinary Medicine, Japan

14:03  Characterization of Toxoplasma gondii transcriptome with a massive parallel sequencing method
Junya Yamagishi, Obihiro University of Agriculture and Veterinary Medicine, Japan

14:16  The effect of host GPI-anchor to Toxoplasma gondii infection
Michiru Tahara, National Institute of Infectious Diseases, Japan

14:29  Plant hormone cytokinins: Elucidating their role in Toxoplasma gondii
Syed Bilal Ahmad Andrabi, National Institute of Infectious Diseases, Japan

14:42  Toxoplasmosis in mainland China
Xiao-Guang Chen, Southern Medical University, China

[Malaria-2] Chair: Malla R. Rao

15:00  The Southwest Pacific NIH International Center of Excellence for Malaria Research
James W. Kazura, Case Western Reserve University, U.S.A.

15:18  The International Centers for Excellence in Malaria Research
Malla R. Rao, National Institutes of Health, U.S.A.

15:36  BREAK

15:50  Plasmodium vivax: Significance and research priorities highlighted by iVax community
Jetsumon Sattabongkot Prachumsri, AFRIMS, Thailand

16:08  China-Thailand-Myanmar ICEMR Program
Guiyun Yan, University of California at Irvine, U.S.A.

[Helminth-2] Chair: Daniel G. Colley

16:26  Cestode zoonoses in Asia: towards evidence based control
Akira Ito, Asahikawa Medical University, Japan
16:39 An immunochromatographic test for diagnosis of alveolar echinococcosis
Yasuhiro Sako, Asahikawa Medical University, Japan

16:52 Usefulness of serological and molecular tools for detection of neurologic parasitic zoonoses in rural areas of southwest Cameroon: toxocariasis, cysticercosis and paragonimiasis
Agathe Nkouawa, Asahikawa Medical University, Japan

17:05 Phosphagen kinases of trematodes: possible chemotherapeutic targets
Takeshi Agatsuma, Kochi University, Japan

17:18 Evaluation of urine-based IgG4 ELISA for detecting lymphatic filarial infection and the development of a visual diagnostic method with urine samples
Eisaku Kimura, Aichi Medical University, Japan

17:31 Basophils are essential for rapidly expelling Strongyloides venezuelensis
Makoto Matsumoto, Hyogo College of Medicine, Japan

17:44 Conclusion of Japan-U.S. Joint Conference on Parasitic Diseases
Intestinal and Free-Living Protozoan Parasites Meeting

National Institute of Infectious Diseases
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January 12, 2011
Wednesday, January 12th
10:00 Opening remarks
Tomoyoshi Nozaki

1. Iron-sulfur clusters assembly of *Entamoeba histolytica*: Purification and characterization cytosolic Fe-S clusters assembly components
Vahab Ali, RMRIMS, India

2. Molecular insights into the amoebic retromer complex
Sunando Datta, Indian Institute of Science Education and Research, India

3. *Entamoeba invadens*: Transcriptome analysis during encystation
Aleyla Escueta- De Cadiz, National Institute of Infectious Diseases, Japan

4. Trafficking mechanism of phagosomal enzymes in *Entamoeba histolytica*
Atsushi Furukawa, National Institute of Infectious Diseases, Japan

5. Emerging trends in the aetiology of enteric parasites with special reference to change in *Entamoeba histolytica* infestation in Kolkata, India
Sandipan Ganguly, National Institute of Cholera & Enteric Diseases, India

6. A study on the pathogenicity of *Entamoeba moshkovskii*
Shinjiro Hamano, Nagasaki University, Japan

7. Metabolomic analysis of sulfur containing amino acid metabolism in *E. histolytica*
Afzal Husain, National Institute of Infectious Diseases, Japan

8. Development of nucleic acid amplification assays for highly sensitive detection of *Cryptosporidium* in water samples
Shinji Izumiyama, National Institute of Infectious Diseases, Japan

9. Analysis of the protein import machinery in the *Entamoeba* mitochondrial remnant
Takashi Makiuchi, National Institute of Infectious Diseases, Japan

10. Gene silencing of mitosomal proteins cause growth inhibition suggests essentiality of mitosomes in *Entamoeba histolytica*
Fumika Mi-ichi, National Institute of Infectious Diseases, Japan

11. Autophagy related proteins in encystation of *Acanthamoeba*
Eun-Kyung Moon, Kyungpook National University, Korea
12. Functional identification of end-binding 1 (EB1) protein of *Giardia lamblia* by complementation and interactome analyses
Soon-Jung Park, Yonsei University College of Medicine, Korea

13. *Regenerating gene* (REG) 1 as a marker and mediator of intestinal injury and repair
Kristine M. Peterson, University of Virginia, U.S.A.

14. 1) Role of acid vesicles in host cell killing by *E. histolytica*
    2) A genome wide lentivirus shRNA library screen for host genes controlling susceptibility to *E. histolytica* killing
    3) Genotyping of clinical isolates of *E. histolytica*
    4) Role of the leptin receptor in innate resistance to amebiasis
    5) Transmembrane kinases and regulation of *E. histolytica* phagocytosis
    6) A negative selectable marker for *E. histolytica* and attempts to integrate foreign DNA in *E. histolytica*
    7) A virulence gene program induced by URE3-BP
William A. Petri, University of Virginia, U.S.A.

15. Detection and subtype identification of *Blastocystis* isolates from wastewater samples in the Philippines
Windell L. Rivera, University of the Philippines, Philippines

16. Diversity of vesicular trafficking in phagocytic protozoa and significance of traffic in *Entamoeba histolytica*
Yumiko Saito-Nakano, National Institute of Infectious Diseases, Japan

17. Subtype–associated variations in *Blastocystis* pathobiology
Kevin SW Tan, National University of Singapore, Singapore

18. Functional genomics of *Acanthamoeba castellani* Neff
Petrus Tang, Chang Gung University, Taiwan

Masaharu Tokoro, Kanazawa University, Japan

20. 18S rDNA sequence typing on the clinical isolates of *Acanthamoeba* in Japan
Kenji Yagita, National Institute of Infectious Diseases, Japan