

Introductory Remarks

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We have planned the COE international symposium entitled “*Present situation and future prospects of tropical medicine in developing world*” on the occasion of COE (Center of Excellence) appointment of our institute. This symposium was organized by our Research Institute of Tropical Medicine, Nagasaki University (Government) as authorized by Ministry of Education, Science, Culture, and Sports. COE programs supporting core research institutions are ongoing by the Government, and our institute has been appointed to be one of them performing excellent work.

During the past decade international relationships have been strained by a variety of problems not only diplomatic and economic but also ethnical and religious. The international situation presents a lot of complex and difficult problems which are changing rapidly. The field of tropical medicine is no exception. There are overwhelming and vitally important health problems in tropical areas located for the most part in developing countries. For the purpose of seeking suitable guideline policies for the 21 century, it is exceedingly timely to review activities of the relevant institutions in tropical countries.

In 1992, the symposium entitled “*Present situation and future prospects of tropical medicine in (so-called economically) advanced countries*” (Inst. Trop. Med. Nagasaki Univ., 1992) was held as part of the activities to celebrate the 50th anniversary of Institute of Tropical Medicine, Nagasaki University. After that, same kind of meeting for developing countries has been expected as second phase.

I have suggested at the symposium in 1992 a few topics in the introductory remarks for discussion concerning institutions of tropical medicine as shown below:

—The *Principal function* of the institution should be organizing of research system and sponsorship for research activities. Additional functions include the dissemination and exchange of information, the promotion of collaborative work and other appropriate scientific activities.

—The *Organization and infrastructure* may differ from institute to institute depending upon respective circumstances.

—As for *Research activities*, the expanded definition of tropical medicine and recent scientific advances in the field have resulted in a broadening of basic scientific policies and research programs, and resulted in a demand for the participation of molecular biology and modern laboratory techniques. Attention must also be paid to the enhancement of field-work and primary health care activities.

—The annual *Budget* for the management of our institute is provided by the government and administered by a treasurer. *Research funding* is another important matter. Each

research scientist or group should have the opportunity to receive research funding from every area of society both public and private.

—*Laboratory facilities* including special ones for tropical medicine should be available on the basis of the budget and research funding.

—*Collaboration with other organizations* is inevitable.

—*Education, teaching program, and training system* are important. Our educational program is designed so that each academic department is responsible for its own academic field of expertise. They are: 1) lectures and practices for under-graduate medical students, 2) a four-year postgraduate course leading to Ph. D., 3) a three-month training course in tropical medicine for doctors, nurses, technologists and relevant professionals, and 4) the medical research training course for researchers from abroad supported by Japan International Cooperation Agency (JICA).

—In addition to the programs mentioned above, our routine *Academic services* include laboratory diagnostic examination of viral, bacterial and parasitic diseases, postmortem examinations and histological diagnostic pathology, and the clinical treatment of patients with infectious diseases at the University Hospital.

—I would like our guest speakers to describe the *Future prospects* of their institutions. One of the responsibilities of the institution of tropical medicine should be to provide leadership and direction in the advancement of tropical medicine and primary health care, and to perform other appropriate duties as required. With regard to our strategy for the development of modern tropical medicine, it is important to; 1) encourage the formation of international cooperation programs, 2) distribute information about opportunities for education and training, and 3) give advice to relevant government organizations based upon our knowledge and experience.

In his presidential address, Krokstad (1993) have mentioned what perspectives should be brought to bear on tropical medicine and hygiene by a society whose members are primarily from developed countries such as the United States and Canada. The field demands an understanding of both the developing and developed worlds. The task before people as members concerned with tropical medicine is to relate the needs and opportunities of the developing world to the human and technical resources of the developed world.

The Hot Zone (Preston, 1994) tells the dramatic story in depth for the first time, giving an absolutely hair-raising account of the appearance of rare and lethal viruses and their "cashes" into the human race. As the tropical wildernesses of the world are destroyed, previously unknown viruses that have lived undetected in the rain forest for eons are entering human populations. The appearance of AIDS is part of the pattern, and the implications for the future of the human species are terrifying. So far ordinary research are being performed in developed countries, it is important characteristic research should be done in the tropics.

Let me show you some examples of combination of work on the tropical field and basic medicine in the laboratory. Nasopharyngeal carcinoma is an epithelial tumor with a distinct geographic distribution and characteristic histologic appearance. It is rare in Europe and North America, but it is among the most common cancers in southern China and Southeast

Asia. Genetic predisposition, environmental factors, and Epstein-Barr virus (EBV) have been associated with the pathogenesis of this tumor. The predisposing genetic and environmental factors in the pathogenesis of this tumor with particular emphasis on the role of EBV have been discussed (Zhong et al., 1993; Senba et al., 1994a; Senba et al., 1994b; Vaughan et al., 1996; Vasef et al., 1997). The pathogenesis of Hodgkin's disease (HD) is suggested to have a strong association with EBV. However, HD related to EBV shows a wide geographic variation in epidemiology. Because these variations among different populations suggest an interaction of environmental factors and a direct role of EBV infection, a comparative study on histologic and virologic features of the disease in western Kenya and Nagasaki, Japan has been performed (Kusuda et al., 1998). The age distribution of HD showed two peaks in younger population and older population in western Kenya, and a peak in older population with low peak in middle-aged group in Nagasaki, Japan. The most common subtype of HD in both countries was mixed cellularity, followed by nodular sclerosis, lymphocyte depletion, and lymphocyte predominance. Mixed cellularity showed a significantly high prevalence among Kenyan younger children. Using *in situ* hybridization method, EBV-encoded RNA (EBER-1) was detected in 79% of the Kenyan cases and 59% of the Japanese cases. Mixed cellularity showed a strong correlation with EBER-1 in both countries. These results suggest that EBV plays a strong role in the pathogenesis of HD among young children in both countries. Environmental and genetic factors may have a role in addition to EBV in the pathogenesis of HD. A sudden increase in the number of Kaposi's sarcoma has been observed along with the epidemic of AIDS. The epidemiology and geographical pathology of Kaposi's sarcoma are quite characteristic.

Institute of Tropical Medicine, Nagasaki University is the only government collaboration research center in the field of tropical medicine in Japan. During the sixty years since its inauguration, our institute has devoted itself to research and education in the field of endemic and tropical medicine and the exchange of scientific and technological knowledge through medical cooperation, both within this country and abroad.

Historically, Nagasaki was Japan's only gateway for European culture from the 17th to the 19th century and served as the cradle for Western medicine, especially by Dutch, German, and British people. The city is blessed with natural beauty and a unique cultural heritage handed down over the past 200 years.

On the basis of our commitment to tropical medicine and to international friendship, we intend to continue our collaborations with developing and advanced countries. I hope that the present symposium will be the first of many future events presented by speakers from tropical world. You will be able to have fruitful results, and get new ideas, new information and new approaches in tropical medicine with special emphasis on challenges for the future. We look forward to your continuing recognition and friendship, and welcome any proposals you have for collaboration programs in the future.

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