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THE OTSUKA WHATS & WHOS

Otsuka
people creating
new products
for better health
worldwide

Commitment to Fighting Against Multidrug Resistant Tuberculosis



From left, Dr. Tadao Shimao, Prof. Lee Reichman, Dr. Hiroshi Ishikawa

The Nikkei Asian Infectious Diseases Conference was held on February 14 and 15, 2014 in Nago City, Okinawa in order to discuss measures for preventing the spread of communicable diseases in Asia. The Okinawa prefectural government and the Ministry of Health, Labour and Welfare provided support for the conference, and Otsuka Pharmaceutical participated as a cosponsor. Otsuka presented the panel discussion on tuberculosis, which was one of the important panel discussions at the conference.

About the tuberculosis panel discussion:

Tuberculosis is one of the three leading communicable diseases in the world, along with malaria and AIDS. Tuberculosis is said to infect one-third of the world's population of 7 billion. Tuberculosis is a problem of the present, not the past, and not only is it a problem in developed countries, it is an even more serious problem in Asia and in developing countries. The discussion covered recent advances that have been made by Otsuka Pharmaceutical in response to the demand for new drugs, and what steps are needed to combat tuberculosis in the future.

“Overcoming Multidrug-Resistant Tuberculosis Through Innovation”

Dr. Hiroshi Ishikawa, Fellow, Otsuka Pharmaceutical

The reason there have been no new tuberculosis drugs in 50 years is that Mycobacterium tuberculosis is a tough organism, and development is difficult and requires a tremendous amount of time and money.

Why did Otsuka Pharmaceutical want to take on such a



challenge? One reason is that for more than 40 years Otsuka Pharmaceutical's corporate philosophy has been to improve the health of people around the world. A second reason is related to Otsuka's global presence – Otsuka opened a plant in Thailand in 1973 and one in China in 1980, and now has approximately 30,000 employees around the world, 70% of whom are employed overseas. And 70% of these overseas workers are in Asia, and are therefore living, with their families, in high-burden tuberculosis countries. A third reason is that, since opening a research institute in 1971, Otsuka's stated research mission has been to not conduct any imitative research, but to conduct research that is unique to Otsuka, research that, in fact, only Otsuka is capable of conducting, in order to discover first-in-class drugs. Moreover, Otsuka was able to forcefully pursue tuberculosis research because it was the idea of Akihiko Otsuka, Otsuka Pharmaceutical's current Chairman.

Research began in 1982 but efficacy was not met and the research failed. Because tuberculosis is a tough organism that grows slowly over 24 hours, Otsuka instead adopted an approach that involved searching for a drug that was not only potent, but also toxic, and then trying to ameliorate the toxicity later. This is the exact opposite of the conventional approach. Together with partner laboratories, Otsuka synthesized 14,000 types of compounds and, in 2002, discovered a promising novel compound; clinical studies were initiated in 2004.

As a future research activity, Otsuka would like to try to establish a global regimen that includes new tuberculosis drugs in order to prevent the emergence of strains that are resistant to new drugs. Dr. Ishikawa said that Otsuka's aim is to discover an anti-tuberculosis drug that can be used to treat latent tuberculosis infections and that can cure tuberculosis quickly, in 1 to 2 months, in order to prevent the emergence of multidrug-resistant strains.

“Controlling TB and MDR-TD in Asia, and the Role of Japan”
Dr. Tadao Shimao, Advisor,
Japan Anti-Tuberculosis Association

The emergence of multidrug-resistant tuberculosis and HIV/AIDS and the movement of people from developing to developed countries (the moving of tuberculosis/communicable diseases) are major problems in Asia and Japan. Around the globe, 940,000 people die of tuberculosis, approximately 70% of them in Asia, and multidrug-resistant tuberculosis accounts for 187,000 deaths. Dr. Shimao said that Japan's role should be to develop simple techniques that allow multidrug-resistant strains to be detected and new drugs to follow in the footsteps of Otsuka Pharmaceutical's new anti-tuberculosis drug.



“Forgotten But Far From Gone”
Professor Lee Reichman, Executive Director,
New Jersey Medical School Global Tuberculosis Institute

Every year, there are 450,000 cases of multidrug-resistant tuberculosis. Pandemic regions are Southeast Asia, which accounts for 40%, Africa, which accounts for 26%, and the Central and South America, which accounts for 19%. Overlapping infection with HIV or the presence of a multidrug-resistant strain results in a cure rate of no more than approximately 50%. In the



absence of a cure, the death rate is 90%. New drugs that can effect a rapid cure and new drugs that can be used to treat multidrug-resistant tuberculosis and that have little hepatotoxicity and few drug interactions are needed. Even though tuberculosis is the world's tenth most lethal disease, only 5 to 8 products are currently in development. Tuberculosis is a disease that must not be forgotten, as it is far from gone.

About the Nikkei Asian Infectious Diseases Conference

The conference was attended by researchers and governmental representatives from all over Asia, including Thailand, Vietnam, and Indonesia; there were 30 presenters, and 150 participants in all, from both Japan and abroad. Japan is closely connected to other countries in Asia through a web of economic, personal and other ties. Communicable diseases pose the biggest danger to health in Asia, and Japan needs to play a leading role in combating them. The official statement of the conference asserted the need for the creation of an Asian network for fighting communicable diseases.