

NEWSLETTER FROM KIYOSE

November 1989

*The Research Institute of Tuberculosis, JATA
3-1-24 Matsuyama, Kiyose-shi, Tokyo 204 Japan*

Research Institute moved into a New Building.

Dr. Masakazu Aoki, Director



It is our great pleasure to send you the Newsletter from Kiyose.

This is the first newsletter after we moved into a new building. Thanks to the support of our government, a new four story building housing

the Research Institute of Tuberculosis has been built and we moved into new spacious building in January 1989. Total floor space is about 8000 square meters, and the new building has 83 rooms to accommodate international and domestic participants in our training course.

The following six areas were and will be the main fields of our activities: (i) epidemiology of tuberculosis, (ii) surveillance of tuberculosis to improve the domestic tuberculosis control programme, (iii) international cooperation through JICA, WHO, IUATLD etc. (iv) basic research on tuberculosis immunology and bacteriology, (v) epidemiological and clinical research on lung cancer and other pulmonary diseases, and (vi) international and domestic training for doctors, public health nurses, X-ray technicians, etc. Within these areas we are now strongly considering how to intensify international cooperation to promote and improve the tuberculosis control programme in developing countries. Your advice and comments are heartily welcomed.

I hope our newsletter will promote the communication between you and our institute. Although it is difficult to send newsletters frequently because of staff shortage and tight schedules, it was decided to send at least one newsletter a year because communication with each other is essential for strengthening worldwide tuberculosis control activities. I want to name this communication as the "Newsletter from Kiyose" from this time on.

You are more than welcome to visit the new building and dormitory, and all of the staff of the institute will welcome you heartily. We look forward to seeing you in the near future !



The Institute has now 5 Departments.

The Institute has now five(5) departments including a department for international cooperation which was newly established in 1987. The organization of the institute is shown below.

The main activities of the International Cooperation Department are: 1) to collect the international health information particularly on tuberculosis, 2) to provide the preparation and training for the Japanese experts or volunteers who are going to work in the international projects mainly under the government scheme, 3) to study how modern knowledge of tuberculosis control is integrated into primary health care, and also how the international cooperation should be made.

The department is now collecting country information on items listed in the right. We would be grateful if you would send us any data available.

Country name

(Year) Population

(Year) Birth rate, Death rate
(If available)

(Year) National budget, Health budget,
TB budget (in US\$)

(Year) Health personnel, TB personnel
(by categories)

(Year) Health institutions (Hospitals,
Hospital beds, Health centres,
Dispensaries, Health stations etc)

(Year) Incidence & Mortality by cause

(Year) Number of TB cases detected
(X-ray, smear/culture)

Number of TB cases treated
(X-ray, smear/culture)

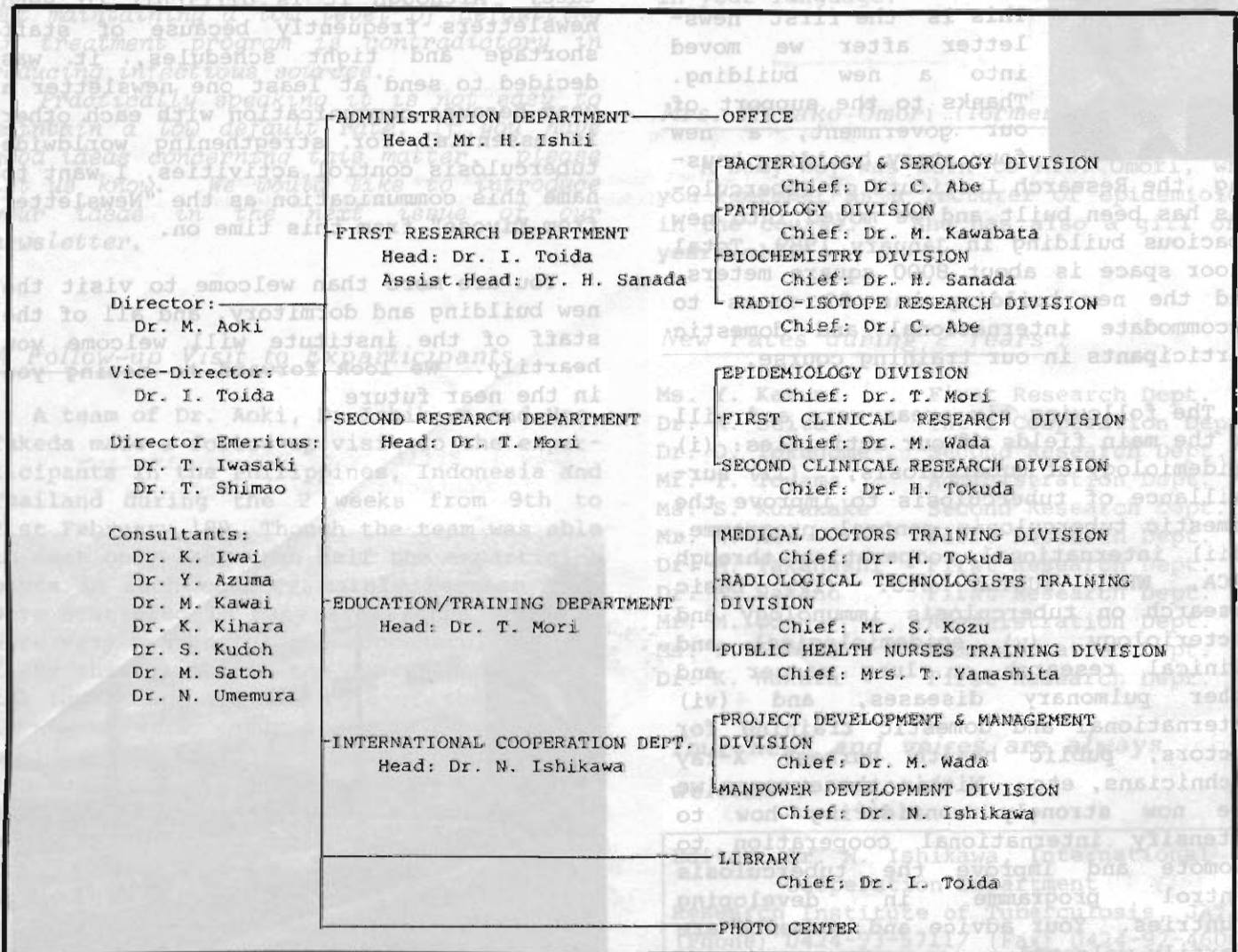
Number BCG-vaccinated (by age,
primary vaccination, revacc.)

(Year) TB prevalence survey data

(Year) BCG scar survey data

Administrative system of TB programme

Health education concerning TB



Messages from Ex-Coordinator

Dr. S. Imamura (from 1963 to 1970)



I retired from the Shibuya Dispensary of JATA in 1983. I am now 71 years old and live in good health, attending TB clinic 2 days a week.

I often recall the old days I served in the international courses and miss the participants at that time.

Dr. Y. Azuma (from 1971 to 1981)



Dear colleagues, I have been silent so long that some of you might have wondered if I were floating out into an unknown space-time continuum. But I am surviving!

After returning from a 3.5 year JICA assignment in the North Yemen, I have been thinking of, or rather meditating on, the effect of interaction between culture and introduced technology.

When I was serving in Southeast Asian countries, I did not give much consideration to this matter. Over there, nature and life style are rather similar, letting me forget the problem of the interaction between the local culture and the promotion of TB programme. However, after having been in Arabia with a traditional culture so different from Southeast Asia I experienced, the problem of the interaction between the traditional culture and introduced technology remains always in my thinking. (A culture should digest an invader, rather than be digested by the latter.)

Of course, I am not insisting against the promotion of TB programme. I am thinking that careful consideration should be given when a so-called community development is planned with introduced technological and/or administrative approaches.

Dr. H.T. Lin (from 1982 to 1986)



I retired from the Research Institute of Tuberculosis in June 1986 and since then have been working in a geriatric hospital in Miyazaki City in the southern part of Japan. I used to emphasize during

my lectures in RIT that participants should get rid of clinical medicine and concentrate on public health control of tuberculosis. Now, I myself am engaged in clinical medicine after 40 years of service in TB control in my country, in countries where I was assigned by WHO, and helping participants from various countries who came to Japan to study TB control.

At the time of retirement, I thought that with my current health status I still could serve people for the rest of my life. Fortunately I found a private hospital that was willing to employ an old doctor like me with little clinical experience. I found that I was still useful in caring for aged people who are suffering from mental or physical difficulties. The proportion of aged people in Japan has been increasing rapidly, and at present 11% of the population are 65 years and above. In 2015 the proportion will increase further to 23%. The reasons for this aging phenomenon are many, but undoubtedly successful TB control is one of them. This will help you remember that the same situation will occur in your country in the near future if you try hard to control tuberculosis and other infectious diseases now.

Although I am caring for aged people who are sick, my mind has never dissociated itself from TB control. Thankfully, RIT invited me to give lectures on the management aspect of NTP once a year. Although it was only 3 days, I have the pleasure of meeting the participants, some new and some old. I miss all of you whom I had opportunities to meet and talk with, and hope that you are in good health and trying hard to control tuberculosis in your own country. Wishing you all the best and success in TB control!

Dr. Tjandra Yoga Aditama, Indonesia
(1987 Control and 1989 Advanced)



A significant change at Kiyose I found after 2 years is that Keka-ku Kenkyujo now has a very nice new building. The place where the old building stood is now a car park. The dormitory has also improved quite good as a part of the new building and a new kitchen in the same room with dining room, and an elevator. The front door has a new and modern door lock system after 10 PM. Every participant may still remember this "magic word", 10 PM !. But the desk, cupboard and bed in the bedroom are still the old ones; the kitchen utensils are also the old one and, ... Ito San is still the dormitory's manager.

In the new dormitory there is a telephone in each room. So participants can receive telephone call from outside in their own rooms and they can communicate each other by phone. An international public telephone is available in the dormitory; so now we don't have to go to Hibari-Gaoka.

Except the Institute and the dormitory, there are not so much changes in Kiyose. The Nichi Supermarket is still there (with all the shops nearby); post office is still at the corner near the hospital; "ginko" is still near the station (but you can find money changer in the bank now) and the station is still there where the express trains still do not stop.

Up to now, I still communicate with my friend exparticipants from some countries I do hope that the friendship among exparticipants can be maintained and remain longer, which is a nourishment to our fights against TB. As we all know that the Research Institute of Tuberculosis at Kiyose is one of the best TB institutions in the world. I hope (as an exparticipant) that we can keep communication with RITB. And I hope that this Newsletter is one of the good way to maintain this communication and also that in this Newsletter we can find the latest information about TB knowledge in the world, the TB situation and it's trend and the activities of fighting against TB in some countries.

Dr. Nungluck Tesana, Thailand
(1987 Control and 1989 Advanced)



I sometimes go out to supervise my TB clinics attached to the District Hospitals and give lectures to public health workers. There is a project of improving TB control in Phon District, 70 km away from Khon Kaen. We are trying to integrate NTP into PHC as I have learned at RIT. First I myself, another doctor and a nurse in a team of Phon Hospital have trained public health workers who are working in subdistrict health centers. Then they went back to their centers to train health volunteers (HVs) in their areas. HVs are collecting sputa which are sent to subdistrict health centers for slide smear. A team of doctor, nurse and lab technician from Phon Hospital visits there periodically to diagnose and treat TB patients. Though this project fund from the TB Division in Bangkok will finish in December 1989, I hope we will continue the program after that. Can you imagine that this project is conducted by a nurse working in the TB clinic of Phon Hospital? She can manage the short course treatment with the drugs we supply from TB center. When she cannot solve the problem, she consults with a doctor in her hospital, or even telephone to me. TB patients are very poor in the infertile north east Thailand. Most of them are farmers who plough the land with buffalos and live in old wooden houses of one room. They grow rice just for their family consumption but not enough for sale. So when they get sick, they have no money for medical care. In addition, transportation is another burden. They have to pay a lot for travelling to a clinic. This is one of the reasons for defaulting. I believe that the way we integrate TB program into PHC is the best to solve this problem. I can tell that other hospitals besides Phon Hospital are also starting this kind of project. In one trial, they teach HVs to make sputum smear slides and follow up the patients. The case detection rate and treatment regularity rate used for evaluation. I hope our SENSEI will visit us. DEWA MATA.

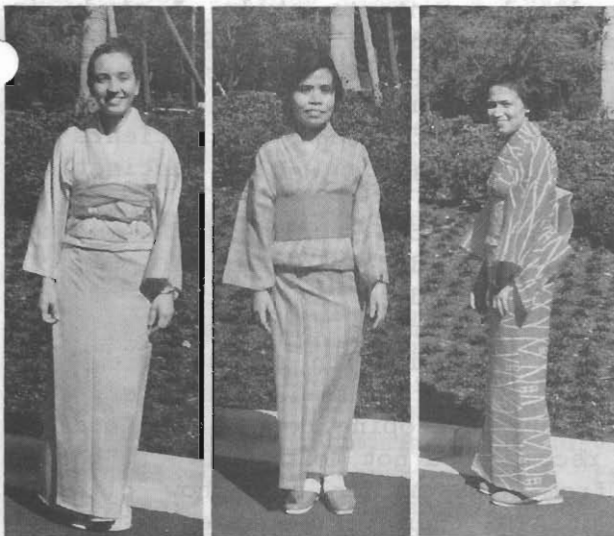
4 continents, 18 countries (mode: Philippines), 25 participants (mean age 36, SD:5.8 years), 16% female; yes it's the 1989 Group Training Course in Tuberculosis Control! Major discoveries so far - a new statistical test we have called the student c test (c = confusion) which can be expressed as:

$$c = \frac{\text{no. of equations remembered} \times \text{no. of batteries worn out in your calculator}}{\text{no. of handouts received} \times \text{no. of hours of statistics classes}}$$

if c is less than 0.05 then the student is statistically significantly confused!

international organisation such as IUAT and WHO, which carry out TB control in developing countries, and play an active role directly as well..... In my opinion a more active role in field work and research work from the Japanese may be necessary. Furthermore the feedback of those who have been trained here may give the Institute and authorities involved a way of follow up." (Dr Omar, Somalia)

"We cannot forget that to educate and organise in health is to prevent and cure the disease. In this way we can cure TB now and forever." (Dr Alfredo, Bolivia)



☞ Aomori apples apparently protect against TB; the question is should they be given orally, or would an injectable form be more effective?

Bangladesh doctors can earn more as dancers in Japan than as TB consultants in their own country! They are also excellent songwriters:

" We have come to the land of hills
 We have travelled over seas
 Your heart is full of love
 Face is full of smiles
 We like you the most. "

On a more serious side, we have been made aware of the great contribution to worldwide TB control of the Research Institute, and the expanding role of JICA in international development. The following are a number of comments made by some of the present course participants.

"Japan is a giant economic country having the both position to contribute to

☞ "The WHO/Japan International Tuberculosis Course is one of the best learning opportunities of a physician's life. Experiences from the host country are very noteworthy, and the exchanging of views with fellow participants from developing countries is rewarding. I hope that someday, through this course, we will achieve our common goal - TUBERCULOSIS CONTROL." (Dr Norman, Philippines)

"This course has convinced me that if education in developing countries, particularly medical education, was prioritised in line with the prevention of diseases prevailing in these countries, then we would be able to solve at least some of our health problems." (Dr Bashir, Sudan)

And what better way to finish than with another verse from Dr Bhuiya:

" So much affections
 So much good dealings
 So much good music
 So much discipline
 How can we forget you? "

Current Issues:BCG Vaccination
Dr. Tadao Shimao, Director Emeritus *

Concerning the efficacy of BCG vaccination, seven controlled trials were conducted by using liquid vaccine; 3 showed excellent protection, 2 showed weak protection and another 2 showed no protection. Divergence in the results is explained mainly by the presence of cross immunity caused by atypical mycobacterial infection in studies which showed a little or no protection. In fact, the prevalence of atypical mycobacteria is high in all 4 areas in which BCG proved to be less or not effective, and the incidence of TB in the control unvaccinated group was low, which indicate that they were already well protected by cross immunity, and BCG could add little to acquired specific immunity.

Since 1968, WHO in cooperation with the government of India, conducted a controlled trial of BCG using freeze-dried vaccine in Chingleput district near to Madras. About 260 000 persons were vaccinated either with 0.1 or 0.01mg BCG or placebo, and they were followed up for 15 years. ARTI was 3 to 4%, and the incidence and prevalence of TB was high in the middle-aged and elderly persons. During follow-up, the incidence of bacillary pulmonary TB was very high (0.50% per year) from initially tuberculin positive reactors and low (0.03%) from initially non-reactors. Efficacy of preventing bacillary pulmonary TB among initially non-reactors was none in the initial 5 years, 45% in the second 5 years, and finally dropped to 16% in the third 5 years, and overall protective efficacy was only 17%. (Table 1)

Several analyses were made to explain low efficacy of BCG in this trial. The prevalence of atypical mycobacteria is also high in this study area, and presence of cross immunity was considered. Another important factor was the low virulence of tubercle bacilli isolated from TB patients in this area. Three quarter of strains isolated in this area showed much lower virulence to animals than the virulence of strains isolated from British patients. In this connection, natural history of TB in this area might differ from that of Europe, and it was assumed that the time interval from primary infection to onset of TB might be much longer in this area.

* Dr Shimao has been serving as a vice-chairman of the Executive Board of WHO since May 1988.

The results of this study gave a great impact to BCG vaccination policy, and WHO decided to conduct other studies to know whether BCG is effective or not. Ten case-control studies have been conducted in 8 countries; protective efficacy ranged from 2 to 88%, and 7 out of 10 studies, efficacy was statistically confirmed. (Fig.1) As to protective efficacy for TB meningitis in children, 5 studies were done, and it ranged 52 to 100%, and these facts indicate that BCG vaccination is more effective to protect TB meningitis than TB of all forms.

Efficacy of BCG vaccination was investigated also by contacts study. A study in Togo clearly indicates that BCG vaccination is effective to prevent severer forms of TB, and the morbidity of children in contact with infectious TB patients is reduced by preceding BCG vaccination. (Tables 2 and 3)

Encouraged by the results of these studies, WHO recommended to continue BCG vaccination for children as a part of EPI (Expanded Programme on Immunization). Coverage of BCG vaccination is at present the best among EPI programme, and it exceeded 80% in many developing countries. However, it is recommended not to give BCG to babies born from AIDS mother and show clinical signs of AIDS even in countries with high prevalence of tuberculosis, as BCG, a live vaccine, may cause generalized infection in children with immunodeficiency.

Table 1. Efficacy of BCG Vaccination (1)
 -- A Controlled Trial in South India --

| A. Incidence of TB by initial tuberculin Reaction | | | | |
|---|----------------------------------|--------|---------|----------|
| | Tuberculin (-) : 0.026% per year | | | |
| | Tuberculin (+) : 0.496% per year | | | |
| B. Annual Risk of TB infection : 3-4% | | | | |
| C. New Cases of TB from Initially Non-Reactors of 1-14 Years of Age | | | | |
| Observ. period | 0.1mg | 0.01mg | placebo | Efficacy |
| 0- 5 y. | 17 | 18 | 9 | none |
| 5-10 y. | 22 | 20 | 38 | 45% |
| 10-15 y. | 47 | 39 | 51 | 16% |
| Total | 86 | 77 | 98 | 17% |

NEWSLETTER FROM KIYOSHI

Dr. KAWAY GREETINGS

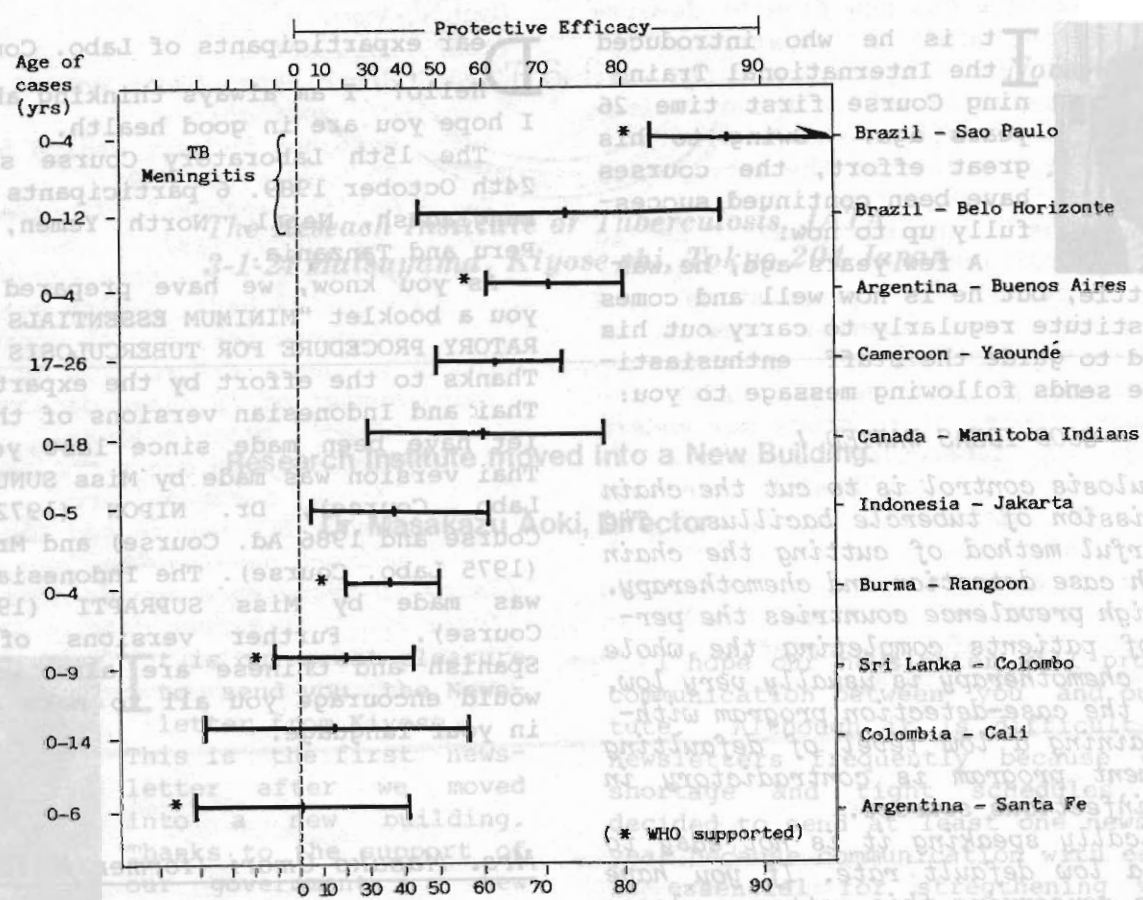


Figure 1. Protective efficacy of BCG against tuberculosis as measured in ten case-control studies. (The bars show the 95% confidence limits on the estimates of protective efficacy.)

Table 2. Efficacy of BCG Vaccination (3) -- Contacts Study in Togo (1) --

| Type of TB | Number of Cases | | Protection % |
|----------------------------|-----------------|--------|--------------|
| | BCG(+) | BCG(-) | |
| Unilateral Adenopathy | 38 | 45 | 47 |
| Multiple Adenopathy | 15 | 54 | 83 |
| Infiltration, No Cavity | 10 | 11 | 43 |
| Cavitary and/or Miliary TB | 10 | 32 | 80 |
| No. of Contacts | 875 | 546 | |

Table 3. Efficacy of BCG Vaccination (4) -- Contacts Study in Togo (2) --

| B. Incidence of TB in Children by Grade of Exposure to Index Case | | | | | |
|---|-----------|-----------------|----------------|-------------|--------------|
| Bed room | Prev. BCG | No. of contacts | No. of Inci-TB | Incidence % | Protection % |
| Same | + | 361 | 56 | 15.5 | 60 |
| | - | 101 | 101 | 38.8 | |
| Different | + | 514 | 6 | 1.2 | 72 |
| | - | 286 | 12 | 4.2 | |

Dr. IWASAKI is Still Active.

It is he who introduced the International Training Course first time 26 years ago. Owing to his great effort, the courses have been continued successfully up to now.

A few years ago, he was sick a little, but he is now well and comes to the Institute regularly to carry out his study and to guide the staff enthusiastically. He sends following message to you:

GOOD IDEAS WANTED !

Tuberculosis control is to cut the chain of transmission of tubercle bacillus. The most powerful method of cutting the chain is through case detection and chemotherapy. In most high prevalence countries the percentage of patients completing the whole course of chemotherapy is usually very low. Improving the case-detection program without maintaining a low level of defaulting in treatment program is contradictory in reducing infectious sources.

Practically speaking it is not easy to maintain a low default rate. If you have good ideas concerning this matter, please let us know. We would like to introduce your ideas in the next issue of our newsletter.

A Follow-up Visit to Exparticipants

A team of Dr. Aoki, Dr. Ishikawa and Mrs. Takeda made a follow-up visit to the exparticipants in the Philippines, Indonesia and Thailand during the 2 weeks from 9th to 21st February, '89. Though the team was able to meet only less than half the exparticipants in each country mainly because they were scattered in many areas, the meetings were very meaningful and successful.

By this visit and the questionnaire, (1) the importance and the role of the courses in Japan were ensured since tuberculosis would remain still as a public health problem and international assistance would be needed in each country, (2) majority of the exparticipants had been playing important roles in the national programme with high appreciation for the courses. Valuable proposals were also made to improve the courses. This newsletter is one of the outcome.

Dr. KAWAI greets :

Dear exparticipants of Labo. Course,
Hello! I am always thinking about you. I hope you are in good health.

The 15th Laboratory Course started on 24th October 1989. 6 participants came from Bangladesh, Nepal, North Yemen, Liberia, Peru and Tanzania.

As you know, we have prepared and sent you a booklet "MINIMUM ESSENTIALS OF LABORATORY PROCEDURE FOR TUBERCULOSIS CONTROL". Thanks to the effort by the exparticipants, Thai and Indonesian versions of this booklet have been made since last year. The Thai version was made by Miss SUNUNTA (1983 Labo. Course), Dr. NIPON (1972 Control Course and 1986 Ad. Course) and Mr. PAIBOON (1975 Labo. Course). The Indonesian version was made by Miss SUPRPTI (1985 Labo. Course). Further versions of Arabic, Spanish and Chinese are also wanted. We would encourage you all to make a version in your language.

Mrs. Masako Omori (former MATSUZAKI)

A baby boy was born to Mrs. Omori, whom you remember as a lecturer of epidemiology in the course. She has also a girl of 2 years old.

New Faces during 2 Years :

| | |
|------------------|-------------------------|
| Ms. Y. Kazumi | First Research Dept. |
| Dr. A. Seita | Int'l Cooperation Dept. |
| Dr. O. Tokudome | Second Research Dept. |
| Mr. T. Toyama | Administration Dept. |
| Ms. S. Kurakake | Second Research Dept. |
| Mr. M. Abe | First Research Dept. |
| Dr. M. Takahashi | First Research Dept. |
| Dr. H. Nakano | First Research Dept. |
| Mr. M. Oda | Administration Dept. |
| Ms. T. Kubota | Administration Dept. |
| Dr. K. Nakata | First Research Dept. |

Your news and voices are always welcome !

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