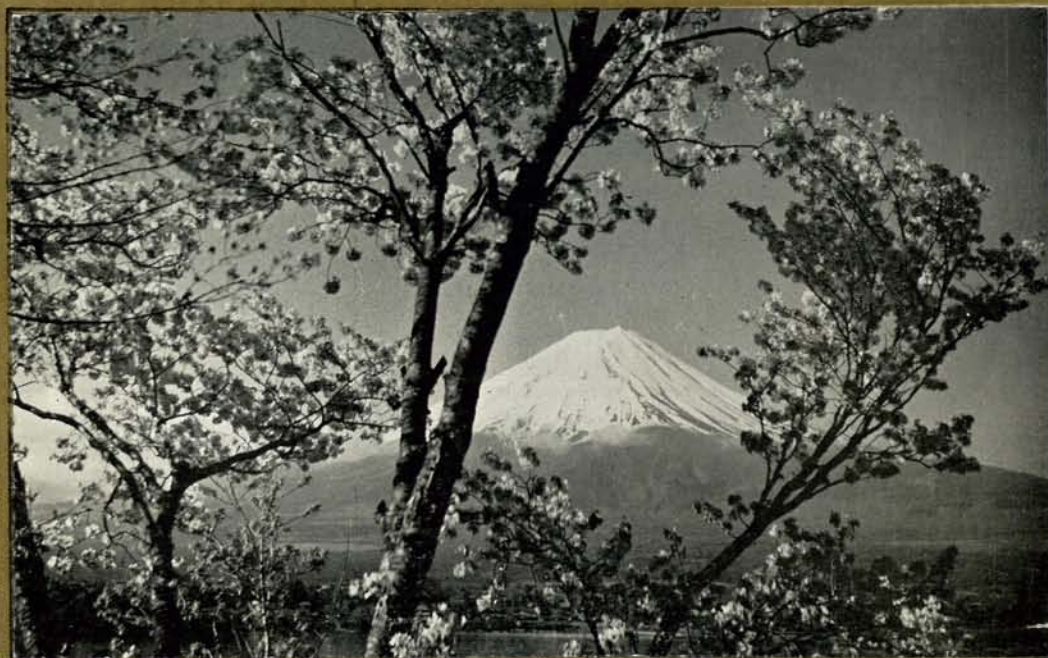


Asian MEDICAL JOURNAL

Vol. 2 No. 3

March, 1959



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Editor's Note

Sadataka TASAKA, M. D.

Professor of Tokyo University

What has resulted from an international congress has been of course considered to be important, but a rather great significance has been placed upon the session itself. Accordingly those concerned would find much trouble in bringing such a congress to success.

The Confederation of Medical Associations of Asia and Oceania, the next inaugural session of which is coming near, was held three times under the direction of Dr. Rodolfo P. Gonzalez, President of Philippine Medical Association, and attended by physicians from various areas in Asia. Subsequently the opening of the First Confederation in Tokyo has been given an impetus and brought to realization by Dr. T. Tamiya et al. Heartfelt gratitude must be expressed for painstaking efforts on the part of physicians interested in the programme to overcome difficulties confronting its realization.

In this way there must have been a number of congresses in advance until a more significant congress is opened, and proceeding ones are said to have been a preparation for succeeding ones. Therefore it is considered that an agency connecting those congresses is required for having succeeding ones held with satisfactory results. What is called an organ magazine is meant for

serving as the agency.

It is particularly to be appreciated on this occasion that this journal will serve as an organ periodical to the Confederation of Medical Associations of Asia and Oceania.

Nations which are to participate in the Confederation amount to 10 in number. The First Confederation is said, in other words, to be a preliminary one for bringing next Confederation to success. Thus each congress has itself taken up and solved many problems which have resulted into conclusions leading to progress of learning, but it has taken a significant part of preliminary congress to the successor.

To speak frankly, it is doubtful whether even representatives who will attend the Confederation have a full information about condition of activities of other medical associations than their own ones, and researches made in the medicine of other countries. This state of things will without doubt constitute a great obstacle to the furtherance of future real activities of the Confederation.

To overcome part of those difficulties, therefore, pages of this journal will be kept for offering informations about medical activities of nations. It is hoped earnestly that most of participants in the Confederation will take into consideration this matter.



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Asian MEDICAL JOURNAL

A Journal of Medical Sciences of Japan and Asian Countries

Vol. 2 No. 3

March, 1959

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Photograph on the front cover shows a View of Mt. Fuji and Cherry Blossoms.

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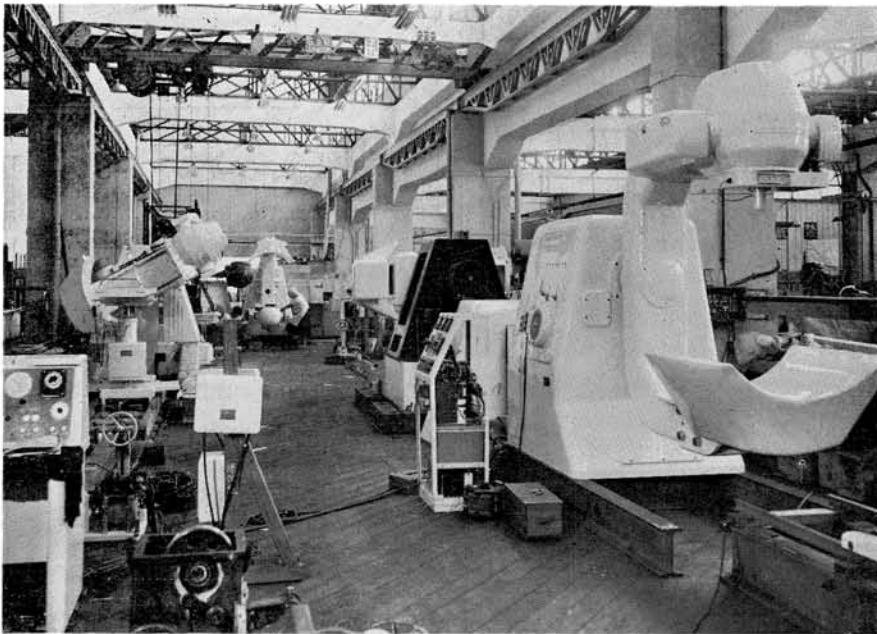
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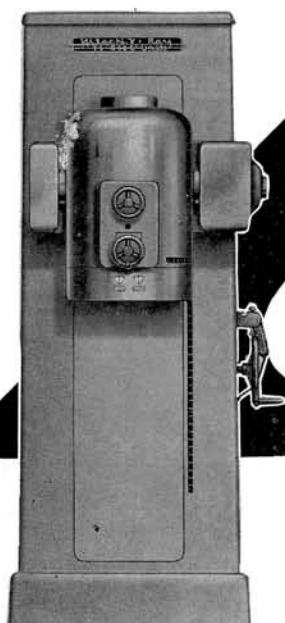
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Message



In April 29, 1950, as President-Elect of the Philippine Medical Association, I have presented a motion to the effect that a South East Asia Medical Conference be held in Manila, in connection with the 44th Annual Convention. There was an unanimous approval. It took three separate Conferences ; 1951, 1954 and 1956 to complete its formation. Hence, in 1956 the Confederation of Medical Associations of Asia and Oceania was born and formalized by the delegates from Japan, Indonesia, Nationalist China, Republic of Korea, India, Iran, Australia, Pakistan, Thailand and the Philippines.

As President of the Confederation, I congratulate Dr. Taro Takemi, President of the Japan Medical Association and President-Elect of the Confederation, and also Dr. Takeo Tamiya, President of the Japanese Association of Medical Sciences and incumbent director of the Confederation, and thru them I congratulate the President and officers of the 15th General Assembly of the Japan Medical Congress, for their untiring efforts to make the First Congress of the Confederation in Tokyo a huge success.

It is very sad indeed that we the physicians of Asia and Oceania do not meet as often as possible, in order to solve our mutual troubles and to relate our successes and new discoveries. The concept of distance and the size of the world has changed, and we measure distance by time. Hence, because of the advancement of transportation and the new discoveries in Medicine, this part of the world is converted into a close family of nations, wherein we as members of the Confederation would play an important role as defenders of Health.

Rodolfo P. Gonzalez, M. D.
President
Confederation of Medical Associations
of Asia and Oceania

Message

It is a great honor for Japan Medical Association that the First Confederation of Medical Associations of Asia and Oceania is to be held in Tokyo simultaneously with the 15th General Assembly of Japan Medical Congress.

Japan Medical Association has about forty years standing history since its founding by the late Dr. Shibasaburo Kitazato, and it is said that the Far Eastern Congress on Tropical Diseases has been one of the greatest international congresses of this kind.

At present state of things has changed entirely from that of the past. Distance between nations has been shortened, and their mutual relations with each other have become closer and closer rapidly. Especially sciences and cultures are being absorbed into their national life in spite of political obstacles existing among them. Violation of the border of learning could not be arrested by any political power. Every nation has formed no more rapid and compact combination in the history of humankind than at present. This may well be called "creation of new world".

I believe firmly that opening of the First Confederation of Medical Associations of Asia and Oceania in Tokyo will make a nucleus of this "creation of new world."

It is the greatest honor and pleasure for Japan Medical Association to have a large number of attendance from foreign countries on this occasion.

In Japan of to-day young students are concentrating their meritorious efforts upon studies in the domain of medicine and sciences. It is much to be desired that foreign scholars will visit Japan and observe them in practice personally. Reciprocal exchange of opinions on studies will be carried on amicably by sense of familiarity in common to peoples of Asia and Oceania. Advices will be heartily welcome for Japan.

Days of meetings are not enough to afford, but all foreign specialists will be satisfied to attend every scientific meeting to be held in Tokyo.



In conclusion I expect greatly that results of the Confederation will give the foundation of cultural cooperation in Asia and Oceania for improvement of welfare among nations concerned in these areas.



Taro Takemi

President
Japan Medical Association

**The Outline of the 15th General Assembly of the Japan
Medical Congress, April 1-5, 1959, Tokyo**

The 15th General Assembly of the Japan Medical Congress is held in Tokyo from April 1 through April 5, 1959. Ever since its first Assembly in 1902 it has taken place every four years and is the largest of the national meetings of medical sciences. The Medical Congress today consist of 48 medical societies, all of which will participate in the next General Assembly and organize lectures, symposia and panel discussions on 87 subjects of special interest in various fields of medicine. The total number of attendance is exceed 30,000.

Besides the scientific meetings at some 15 halls, there are scientific exhibit and display of medical motion pictures and color-television. The firms have a large scale technical exhibit. Several social events arranged for participants.

Doctors and medical scientists from Asia and Oceania are cordially invited to all scientific meetings if they do not mind the Japanese language used almost exclusively except for the guest speakers from abroad who will use English, German or French.

President: Prof. Yushi Uchimura

Vice President: Prof. Yoshito Kobayashi

Vice President: Prof. Tomio Ogata

Secretary General: Prof. Isaharu Miki

Office: The Japan Medical Association, 2 chome,
Kanda, Surugadai, Chiyodaku, Tokyo.

Message

Progress of medicine has gone on with development of human society. Accordingly the former cannot be considered independently from the latter.

It is a matter of course that all physicians to attend the Confederation of Medical Associations of Asia and Oceania are making their utmost efforts for betterment and development of the nations or the societies which they belong to.

However, development of learning itself must be different from that of territorial community they belong to. This means clearly that it is greatly significant for the physicians and specialists to meet together in a hall, and express their experiences and whole stock of knowledges. At the same time such an attitude must be said to be the duty of those interested in learning.

For the time being the purpose of the Confederation is to promote health and welfare of peoples in Asia and Oceania, and for this reason it is to be desired that as much excellent scholars as possible will attend the Confederation from wider areas of these two Continents. It must be especially so, because medicine not only involves life of an individual, but also vital problems in common to humankind.

I extend much hope for the Confederation that every possible opportunity will be utilized to induce the scholars to participate from wider areas in order to accelerate peace of the world and happiness of the humanity.



Takeo Tamiya

Takeo Tamiya

President

The Japanese Association of Medical Sciences

Message



Material civilization has not always brought true happiness upon humankind. Scientific revolution in the latter half of the 20th century shows that humankind have obtained knowledges enough to utilize and control atomic nuclear energy. However, so far as these knowledges are concerned, it is much to be considered whether humankind may become either happier or unhappier in the long run. In other words the destined distress may be rather avoided without the weapon of civilization.

On the other hand, developments in medicine and medical supplies are likewise results of advanced scientific knowledges, and will contribute directly and certainly towards betterment of human happiness.

Average natural span of life of the Japanese has indicated a remarkable improvement in the past twenty years. In the 1930's men and women lived to more or less than average forty years of age, while at present they have taken a new lease of life, attaining the term of sixty years of age. Varieties of infectious diseases have decreased to a marked degree, and tuberculosis or leprosy considered incurable in the past now prove themselves to be perfectly curable, while even therapies of cancers and virus diseases formerly defying remedy will not occupy much time in working well. There is no barrier standing in progress of the science. Development of medicine and discovery of medical supplies will equally bring benefits upon humankind. Medicine and pharmacology mean what is called Apostle of peace, and indicate a sign of silent peace diplomacy.

To my great gratification, the 15th General Assembly of Japan Medical Congress is to be honored with attendance of many physicians from Asia, Europe and America, gives a chance for exchange of opinions upon realization of the common purposes and missions, and symbolizes fulfilment of the world peace to be pursued as our ideal.

A handwritten signature in cursive script that reads "Morizo Ishidate".

Morizo Ishidate

President

Pharmaceutical Society of Japan

Message of Congratulation to the Inaugural General Meeting of the Confederation of Medical Associations of Asia and Oceania

National hygiene has vital relations to the welfare of the nation, and ceaseless efforts are being made in every country towards its betterment. To combat diseases may be one of the propositions to be answered by mankind wishing to lead a happy life. It is the trend of things to be congratulated that medical conferences of an international nature have of late been very frequently held with excellent results through the collaboration of humanitarian scholars rising above the difference of principles and contentions.



The Inaugural General Meeting of the Confederation of Medical Associations of Asia and Oceania convened this time is hopefully expected to produce inestimable benefits to the peoples in this area of the world, who have been closely related to one another from old times and are now forming an inseparable social solidarity. We, as the Japanese people being a member of the Asia-Oceania community and particularly as those touching on the fringe of medical science and its practice, look for much from what will be conferred at the meeting.

Public hygiene in the area of Asia and Oceania has more or less been mistaken to have been at a lower level, but the fact is that our country ranks high along with the senior nations of the civilized world not only in the medical science and skill in practical medicine, but also in the manufacture of pharmaceuticals and various medical supplies. Particularly in the pharmaceutical field, almost all of such pharmaceuticals of superior quality as are widely used in the civilized world are being manufactured in this country out of such factories as provided with most modernized facilities, and such products amounting to fifteen million dollars are annually being shipped to overseas markets for consumption.

Sincerely we hope that the inauguration of the Confederation will be made an occasion for having this state of things in Japanese medicine thoroughly understood and recognized by all nations in the area through the joint efforts of the participants

in this meeting and thus the Confederation will be of service in the furtherance of the hygiene and welfare of all peoples living in this area of the world. In the hopeful expectation that along with the growth and expansion of the Confederation's mechanism the Asia-Oceania zone to which we all belong will become the area most peaceful and high in the level of culture in the world, and this in the not distant future, the inauguration of the Confederation is heartily congratulated by us, wishing for it all the success it deserves.



Chobei Takeda

Presiding Director of Japan Pharmaceutical,
Medical and Dental Supply Exporters'
Association

Introduction of Japan Pharmaceutical, Medical and Dental Supply Exporters' Ass'n.

Japan Pharmaceutical, Medical and Dental Supply Exporters' Association was organized in July 1953 pursuant to the provisions of the competent laws and regulations. And its purpose is nothing else but with our sincere desire to establish and then to assume such a fair and appropriate posture for export transactions as demanded by the nation. It is our sincere desire that an organized effort is thus put forth for the sound development of an export trade in our lines of production, unfair transactions being studiously avoided.

This Exporters' Association is constituted by nearly all exporters in Japan of pharmaceutical preparations, medical, surgical and dental apparatus and appliances, and surgical dressings (including makers who deal in export trade). And a wide export margin is being left for pharmaceutical products remarkably improved in quality in these recent years as well as for medical and dental instruments and appliances finished with high precision and craftsmanship and other sanitary supplies selected excellently and superior in quality.

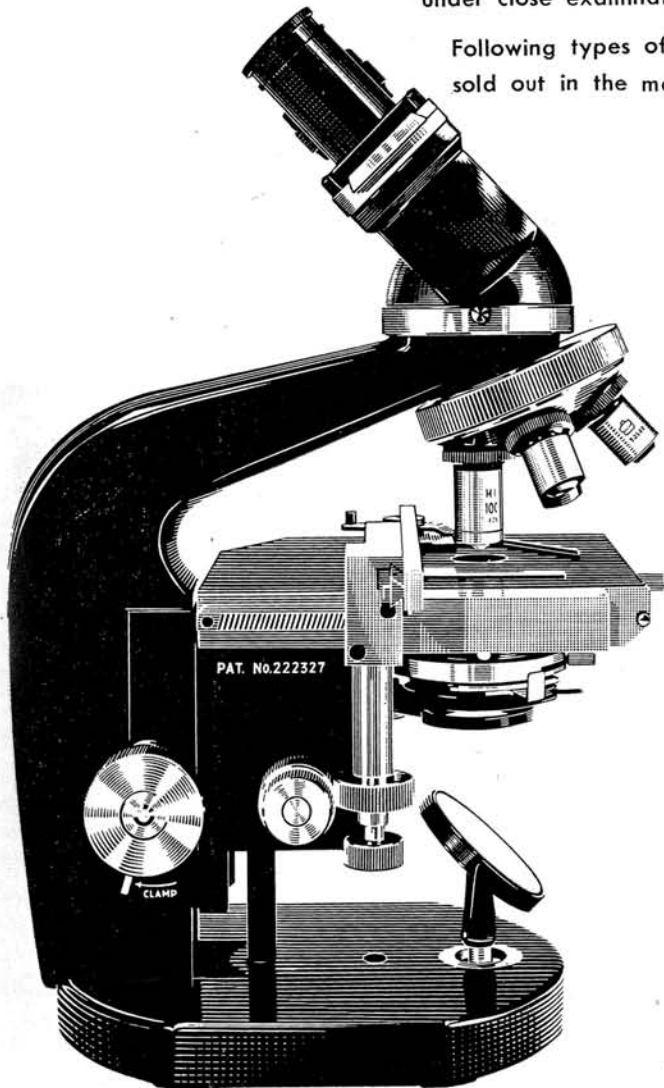
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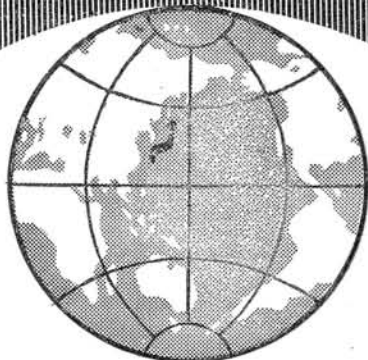
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On the General Assembly of Japan Medical Association

Tomio OGATA

Professor, Tokyo University.

The General Assembly of Japan Medical Association has about sixty years standing history, and has been held fourteen times every four years. This is the fifteenth General Assembly.

It was in the middle of the sixteenth century that Western medicines were for the first time brought to Japan. These were introduced together with Christianity by Portugese and Spaniard. Accordingly these were no more than religious medicines as means of facilitating propagation of Christianity, and did not go beyond the domain of Ganolez Pathology in their theory. Afterwards connection with Portugese and Spaniard ceased entirely owing to the ban on Christianity and consequent order of national isolation of 1639. In their stead Dutch began to come, and as a result modern Dutch medicine appeared on the stage. In social circumstances of the feudal system where sciences could not hope to attain satisfactory development, a number of enlightened persons continued to make their ineffective efforts in absorbing modern Occidental medicines, overcoming inconveniences existing between different languages. But their efforts gave the foundation to reception of German medicine after the Great Social Renovation of 1868.

Speaking correctly, it was after the Meiji Restoration of 1868 that modern medicines of Japan started. In 1875 the new government established the medical institution in order to modernize therapies. Consequently establishment of hygiene administration, educational institutions of Western medicines, license system for physician and separation of dispensary from medical practice were undertaken.

The period of about fifty years from then to the outbreak of the World War I corresponded to the cradle time for Japanese medical circle. There were established in succession Medical School of Tokyo University in

1878, Tokyo Medical Association in 1887, Japanese Association of Medical Sciences in 1890, and until 1910 fourteen societies including those of anatomy, otorhinolaryngology, pediatry, surgery, gastroenterology, dermatology, psychoneurology, dentistry, obsterics and gynecology, internal medicine, hygiene, pathology, were inaugurated. During this period there appeared such world famous scholars as Drs. Shibasaburo Kitazato (established the serum therapy in 1890), Kiyoshi Shiga (discovered dysentery bacillus in 1897), Kenkichi Takamine (discovered adrenalin in 1901), Sahachiro Hata (initiated Salvarsan in 1909 with Dr. Ehrlich), Hideyo Noguchi et al. Put most of achievements made by the above mentioned specialists were realized in laboratories of foreign countries, having nothing to do with Japanese medicines.

The outbreak of the World War I gave an impetus to independence of Japanese medicines. Impossibility of sending students abroad and stoppage of smooth communications with foreign countries were chief reasons for making independence of Japanese medical sciences from foreign influence necessary. Moreover development of machine industries and progress of modern techniques were other reasons for realization of the medical independence. For less than fifty years since then Japanese medical sciences have made remarkable strides along with those of the world. In spite of ruin and paralysis which Japan's medical circle underwent before and after the end of the World War II they have now demonstrated splendid achievements.

About fifty scientific societies belonging to Japanese Association of Medical Sciences will participate in the 15th General Assembly of Japan Medical Congress. Most of these societies have a long standing history as mentioned before, but several of them have been instituted these few years. Division

of scientific societies are owing to diversified spheres of clinical and fundamental medicines consequent to progress in the medical sciences.

In General Assemblies already convened there were held those scientific meetings only at the same time, but there was no horizontal relation between them. But in these circumstances results of the scientific meetings had no chance to be realized systematically in therapy and prevention of diseases owing to specializing and diversifying trends of medicines. For scientific meetings to maintain organic relation each other, and hold lectures on the occasion of this General Assembly, it is one of new characteristics of the 15th General Assembly of Japan Medical Congress.

How will this purpose be realized? Main problems confronting the whole medical world of present Japan are to be selected and arranged by Professors Tomio Ogata, Shigeo Okinaka and Tomizo Yoshida among materials presented by the societies. As a result there will be presented whole range of topics attracting interests of Japanese medical circle. It is thought necessary, though it seems to be over avaricious at first thought, that all topics of the times are to be presented to the General Assembly. When same topics will be taken up at next General Assembly the treatment of themes may help us to affirm the progress which has been experienced in solving the themes for these four years.

In addition the General Assembly will be characterized by a number of attendance of foreign scholars. They are invited in the capacity of authorities in respective fields on recommendation from Japanese Ass'n of Medical Sciences and scientific societies. Among foreign participants there will attend Dr. Barsky of New York, who made plastic surgery on an atomic bombed Japanese daughter, Dr. Domagk of Germany, discoverer of Sulfonamides, Dr. R. P. Gonzalez, president of the Philippine Medical Association and others. More than fifty specialists are expected to attend from various areas of the globe. Especially Dr. R. P. Gonzalez, President-Elect of the Confederation of Medical Associations of Asia and Oceania, will preside

over the Confederation.

Promoters have considered it preferable to place so much emphasis not only upon medical problems, but also upon ethics of medicine, that considerable efforts have been made to induce Dr. Albert Schweitzer in Africa to visit Japan. But it is much to be regretted that Dr. A. Schweitzer, although he had much interest in this matter, has declined this offer owing to his advanced age.

In conclusion a reference will be made to the Confederation of Medical Associations of Asia and Oceania. The Confederation had been attended by representatives of medical associations in Asia including those of the Philippine Medical Association. When the 3rd Confederation was held in Manila 1956, Drs. Takeo Tamiya, President of Japanese Ass'n of Medical Sciences and Korekiyo Obata, President of Japan Medical Congress happened to participate. Desire was expressed among representatives that the coming Confederation should be convened in Tokyo 1958. However, Dr. T. Tamiya and other representatives of Japan insisted that opening of the next Confederation simultaneously with the 15th General Assembly of Japan Medical Congress to be held in Tokyo 1959 might have much significance and effect in various respects. With their proposal Dr. R. P. Gonzalez agreed on condition that representatives from Oceania having close connection with Asia should be included among attendance. This is to be the inaugural general assembly of newly reorganized Confederation of Medical Associations of Asia and Oceania, and so its future management and activities will be main objects for discussion. Almost every participant may be expected to attend the General Assembly of Japan Medical Congress voluntarily.

From this viewpoint the coming General Assembly has a great significance in mutual exchange of scientific knowledges among nations. Considering from the fact that modern Japan could not establish an independent position in the field of medical sciences from foreign countries in the beginning, we feel deeply impressed by such expanded scope and amplified content of the 15th General Assembly of Japan Medical Congress as above-mentioned.

Present Situation of Medical Supplies Industry in Japan.

Manpei SUZUKI

President, Union of Medical Supplies Association.

1. Place of medical supplies in chemical industry.

The output of medical supplies in recent Japan, as indicated in Table 1, stands second to that of chemical fertilizers in the field of chemical industry, and accounts for about 20% of the sum total of chemical products.

Table 1. The sum total of chemical products (1955-1957) Unit: Billion Yen.

	1955	1956	1957				
	Output	%	Output	%	Output	%	
Chemical fertilizers	105.1	23	118.3	21	125.4	20	
Medical supplies	89.5	19	103.8	18	125.1	20	
Oil and fat products	45.8	10	49.9	9	51.6	8	
Inorganic drugs and pigments	35.4	8	42.9	8	44.3	7	
Synthetic resins	25.1	5	34.6	6	43.9	7	
Soda and correlated products	26.0	6	36.0	6	38.4	6	
Paints	24.6	5	32.9	6	36.7	6	
Dyestuffs and medical intermediates	24.2	5	26.0	5	34.8	5	
Organic products	15.7	3	22.8	4	31.1	5	
Photosensitive materials	14.3	3	16.2	3	16.5	2	
Tar products	10.3	2	13.0	2	14.0	2	
Others	50.2	11	66.3	12	80.3	12	
Total	466.2	100	562.7	100	642.1	100	

2. Change of the output of medical supplies after the War.

Production of medical supplies of Japan in 1946 immediately after the War could not cope with growing domestic demands owing to devastated productive facilities and shortage of raw materials, thereby threatening to aggravate hygiene condition of the nation. However, it was managed to satisfy the domestic demands for medical supplies only a few years later by the joint efforts of government and people. As new types of drugs and pharmaceuticals with immediate effects such as D. D. T., Penicillin, Streptomycin, Chloromycetin, Aureomycin, etc., which had not been popularized in our country, began to be imported, the government embarked out on home production of these important medical supplies, which reached the



same sum total as before the War. As a result Chloromycetin, Aureomycin and other imported medical supplies came to be produced in Japan successively thanks to the technical cooperation with foreign countries. Consequently the amount of imported antibiotics in Japan indicated 3.7% of the sum total of medical supplies in 1951, as shown in Table 2, while it stood at only 0.5% of

Table 2. Amount of imported antibiotics. Unit: Billion Yen.

Year	Imported sum	% of total output of medical supplies.
1951	1.558	3.7
1952	2.064	3.6
1953	2.266	3.0
1954	1.540	2.0
1955	0.840	0.9
1956	0.572	0.6
1957	0.640	0.5

the sum total in 1957. Subsequently, in addition to the above mentioned antibiotics, Latracyclin and Oxitetracyclin have been produced in Japan. Moreover high grade Sulfonamides such as Sulfadiazine, Sulfamerazine, Sulfisoxazole and Sulfisomidinum, anti-

tuberculosis agents including Isonizidum, Sodii Paraaminosalicylas, and Calcii Paraaminosalicylas, and insecticides, i.e. D.D.T. and BHC etc., have been supplied in our own country. In 1957 Kanamycin, one of antibiotics, was discovered by Dr. H. Umezawa, which was found to be effective on tuberculosis. And in 1953-1954 Sarcomycin and Carzinophilin, both of them antibiotics, were also discovered in Japan, and found to be anticancerous agents.

In addition the domestic production of leading hormone such as hitherto imported Predonison and Predonisoron has been encouraged and undertaken.

A brief reference has been made to recent development of medical supplies industry in the above. It is indicated in Table 3 that their total amount of production, standing at only 1.9 billion yen in 1946, reached 125.1 billion yen in 1957, and this shows a rapid increase in the production, although some allowances are to be made for general advance in prices.

Table 3. Yielding of medical supplies. Unit: Billion Yen

Year	Yielding	Year	Yielding
1946	1.9	1952	57.1
1947	5.2	1953	75.6
1948	17.9	1954	78.5
1949	31.0	1955	89.5
1950	31.9	1956	103.8
1951	42.4	1957	125.1

The yearly outputs of Vitamins and Sulfonilamides since 1953 are shown in Table 4, and the former in 1957 increases by about double that of 1953, while the latter in 1957 increases by half as much as that of 1953 respectively.

Table 4. Yearly outputs of Vitamins and Sulfonilamides.

Year	Unit: Billion Yen	
	Vitamins	Sulfonilamides
1953	8.0	2.9
1954	9.1	2.9
1955	10.8	2.8
1956	11.9	3.1
1957	16.1	4.5

In regard to their export Table 5 indicates that it took only 0.14% of the total output in 1947, but making a steady and yearly increase, it reached about 4% of the total yielding.

Table 5. Export of medical supplies.

Year	Unit: Billion Yen	
	Export	% of the output
1947	0.007	0.14
1948	0.045	0.25
1949	0.099	0.31
1950	0.495	1.56
1951	1.046	2.49
1952	1.548	2.63
1953	2.116	2.79
1954	3.196	4.06
1955	2.885	3.25
1956	3.881	3.76
1957	5.258	3.70

3. Prospects of medical supplies.

As mentioned before, medical supplies industry has taken a leading position in chemical industries in Japan. With establishment of many laboratories and initiative of pharmaceutical techniques, both of which lead the world level, it is expected that invention and increased production of higher grade medical supplies will be carried on sufficiently to meet with growing demands for them home and abroad.



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Myocardial Infarct and Arteriosclerosis Induced by Several High Molecular Substances. II

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Several high molecular substances are known to possess a special property capable of eliciting the host response of Landy and Shear,¹⁾ inducing the injury of the endothelial cells of blood vessels, precipitating the fibrinogen, and clumping the platelets.¹⁾⁻⁷⁾

One of such substances; the polysaccharide deprived from *Shigella flexneri* 2b, was administered on rabbits and it was found by the authors⁸⁾ that the repetitious administration of sufficient dose of the polysaccharide, which is capable of eliciting the host response,¹⁾ induces atherosclerosis-like arteriosclerosis and myocardial infarctlike lesions. In addition the administration of a small amount of adrenaline has been shown to aggravate the injuries by the polysaccharide and the concurrent administration of magnesium chloride has also been shown to exert a striking preventive effect on them.

It is the object of this communication to report on the experiments on rabbits, fed on the low fat diet, which show: first, that the repetitious administration of the same bacterial polysaccharide with a small amount of adrenaline induces not only the atherosclerosis-like injury of the artery and the myocardial infarctlike lesions as reported on the 1st report,⁸⁾ but also induces often large transmural infarct with the occluded mainstem of the coronary artery; and second the other high molecular substances, glycogen, and dextran, and a suspensoid; kaolin, induce the atherosclerosis-like lesions of the artery and myocardial infarct and infarctlike lesions as

in the case of the bacterial polysaccharide and the damages of the heart and artery were also aggravated by the additional administration of adrenaline.

Materials and methods

31 male rabbits weighing 1.8 to 2.3 kg were fed on the ordinal low fat diet with barleycorn and vegetables of the authors' laboratory.

The first group of 7 animals is control. The second group of 9 animals received 15 mg per kg of glycogen alone or same amount of dextran alone or 5 mg per kg of kaolin alone every 2 days intravenously during 4 weeks. The third group of 20 animals received 1 or 3 or 10 μ g per kg of adrenaline intravenously 30 minutes after the intravenous administration of 50 μ g per kg of the bacterial polysaccharide or 15 mg per kg of glycogen or 15 mg per kg of dextran or 5 mg per kg of kaolin every 2 days during 4 weeks.

High molecular substances. Bacterial polysaccharide deprived from *Shigella flexneri* 2b K3, the same polysaccharide used in the former experiments,⁸⁾ glycogen-Takeda, dextran-Nagoyaseito, and kaolin-Kyokuho were utilized dissolved or suspended in physiologic saline. Adrenaline Sankyo was freshly prepared, dissolved in physiologic saline at each time.

The experiments was terminated by killing all surviving rabbits by air embolism at the end of the 5th week. Immediately after the autopsy, the whole internal organs were fixed

in neutral formalin for the subsequent histochemical demonstration. The each organ was weighed and observed macroscopically with the ordinary pathological exploration using hematoxylin and eosin, Elastica-van-Gieson, Sudan III, von Kossa's silver nitrate stain, and Altmann-Kull's mitochondrial stain.

The effect of the high molecular substances used in this experiment, was tested in its effect on circulating platelets, leucocytes, and erythrocytes of rabbits and it was revealed that the intravenous administration of those substances induced -35 to -70% decrease of circulating platelets 30 min-2 hours after the administration, which recovered within 4-48 hours, and -25 to -60% decrease of circulating leucocytes, chiefly granulocytes, following the decrease of platelets, which recovered after 1-4 hours with their further increase thereafter to a leucocytosis of 12,000-15,000 per mm³ 2-4 hours after the administration.

The intradermal injection of 10 µg adrenaline in 0.1 cc of saline, which was performed within 4 hours after the injection of those high molecular substances, induced local hemorrhagic necrosis.

Results

1. Control animals showed no appreciable change of the heart and the other organ.

2. Animals treated with each of dextran, glycogen, or kaolin alone showed a slight change of the intima of the aorta; showing slight increase of a metachromatic substance and slight fibrous thickening of the intimal layer. The coronary artery, especially the medium-sized artery penetrating the wall of the left ventricle showed elastofibrosis of the intima and fragmentation of the internal elastic membrane. The artery outside the heart showed far weaker and sometimes almost no change, except for some of the medium-sized or small artery or arteriole of lung and kidney, sometimes of brain, which showed a slight elastofibrosis of the intima. In the myocardium of the wall of the left ventricle there were small but often grossly visible degenerative foci locating in the papillary muscle or in the myocardium beneath the

endocardium. There were foci of different stages; the fresh foci showed ischemic degeneration of myofibres stained eosinophilic by hematoxylin and eosin, and also strikingly fuchsinophilic by Altmann-Kull's technique. Surrounding the degenerative myofiber the interstitial cells showed proliferation. Some foci represent scattered coagulative necrosis of a portion of myofibre and they may correspond to a territory of certain capillaries. The larger foci represent massive degeneration of myofibre, accompanying by vacuole formation, proliferation of interstitial cells and sometimes few round cell infiltration. Such foci represent a territory of arterioles or small arteries or medium-sized coronary arteries and there were found often corresponding occluded or almost occluded arteries with elastofibrous proliferation of the intima. The older foci showed fibrosis and in the rabbits kept alive for 2 months there were found calcified scars.

3. Animals received adrenaline following the pretreatment with the high molecular substances showed similar but far stronger changes of arteries and the heart as compared with the former group.

All animals showed macroscopically visible myocardial infarction. Also there were many foci of different stages as in the animals of group II. They located most commonly scattered in the subendocardial layer, but in 4 of all 5 cases treated with the bacterial polysaccharide combined by 3 µg per kg of adrenaline and in 3 of 5 treated with the glycogen combined by 3 µg per kg of adrenaline, large infarcts with the local occluded large coronary artery due to its intimal changes were found as in Fig. 1.

The artery showed also characteristic change which was observed in the former experiment. The aorta showed no grossly visible change. Microscopically any change indicating Mönckeberg's sclerosis was not found. The intima was thickened due to elastofibrosis and accumulation of metachromatic substances and showed fragmentation of the internal elastic membrane. The media showed just a slight irregularity of the muscle fibre. The most severe change was

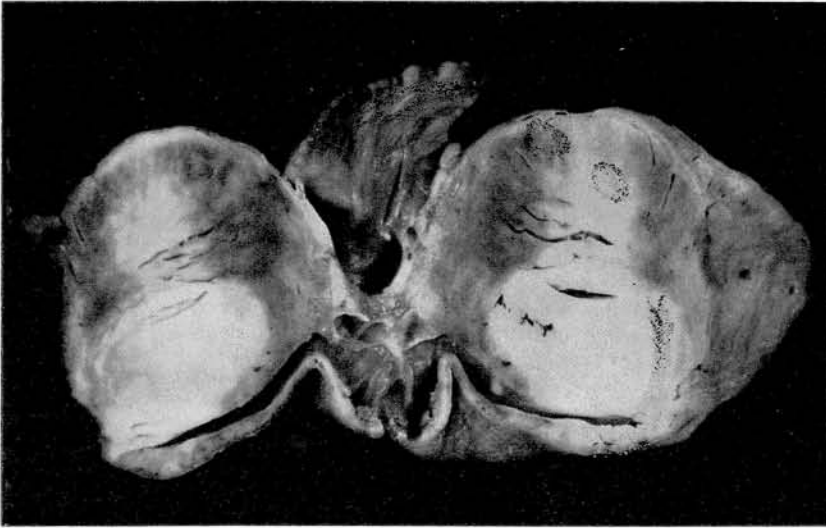
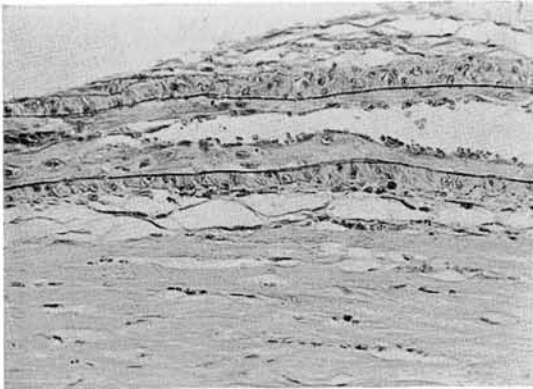


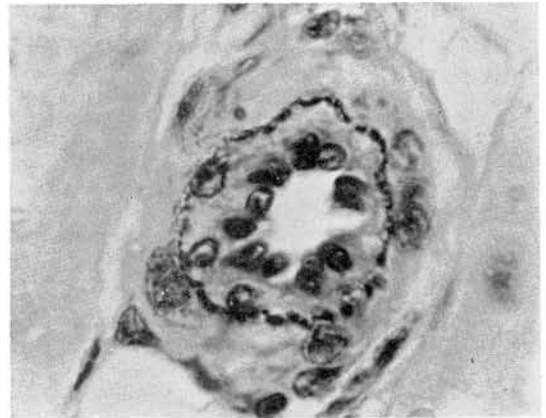
Fig. 1.

A heart of No. 117 rabbit treated with bacterial polysaccharide (50 $\mu\text{g}/\text{kg}$) and adrenaline (3 $\mu\text{g}/\text{kg}$), 12 injections within 4 weeks.

A: Massive and transmural infarct in the anterior wall of the left ventricle due to occlusion of coronary artery (B).



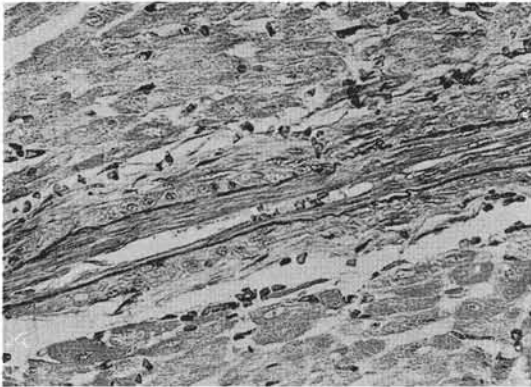
B: Occluded coronary artery due to arteriosclerosis of the penetrating branch of Ramus descendens anterior (Elastica-H. E. stain 260 X).



C: The arteriole showing intimal thickening, proliferation of intimal cells, fragmentation of lamina elastica interna, and atrophy of the media (Elastica-H. E. stain 1300 X).

Fig. 2. No. 152 rabbit's heart treated with glycogen (15 mg/kg) and adrenaline (3 μ g/kg), 12 injections during 4 weeks.

A: White greyish infarct in the papillar muscle and left ventricular wall of the posterior side.



B: A medium-sized coronary artery. Marked intimal elasto-fibrosis, fragmentation of the lamina elastica interna, atrophy of the media, and elastofibrosis of adventitia can be seen (Elastica-H. E. stain 230 X).



C: Small coronary artery showing the fibrous thickening of the intimal with the eosinophilic and vacuolar degeneration of the myofiber and myocardial fibrosis (Elastica-H. E. stain 300X).

observed in the coronary arteries of medium-sized which penetrate the wall of left ventricle. The intima showed elastofibrous thickening and the lumen became extremely narrowed and sometimes it was nearly occluded and the periphery of such an occluded artery showed massive infarct. The media showed slight atrophía and sometimes looked edematous and the adventitia was somewhat fibrous. The change of coronary arteries outside the left ventricle was also conspicuous, but was far weaker. The medium-sized, small arteries, and arteriole of the lung, brain, kidney, and some of other organs showed often similar change though far weaker. The parenchymatous change in the kidney, in the liver, and in the other organs except the heart and blood vessels, was conspicuous.

Depending upon the difference of used substances no apparent difference seemed to be caused in the quality of the damages of the heart and blood vessels.

The animals treated with the bacterial polysaccharide, received different dosages of adrenaline, i.e. 1 μ g per kg, 3 μ g per kg, and 10 μ g par kg. The damages of the heart and blood vessels showed no difference in their severity according to the dosage of adrenaline used.

Discussion

Hueper¹⁰⁾ (1941) found that some high molecular colloids cause atheroma-like lesions of arteries in dogs. Thereafter many research workers¹¹⁾ explored the significance in atherogenesis of the state of aggregation of cholesterol in the plasma and of the physico-chemical nature of blood lipids and lipoproteins. In the generalized Shwartzman reaction in rats by Liquoid the concomitant appearance of myocardial necrosis has been reported by Gronvall and Brunson¹²⁾ (1956). But the myocardial lesion by the high molecular substance as a main morbid appearance has not been reported until the authors' 1st report.⁸⁾⁹⁾

The most important finding in this report is the confirmation of the occlusion of the regional artery due to atheromatous prolifera-

tion in the many of the degenerated myocardial foci. So that the nomination in such foci was changed from infarctlike lesions⁸⁾⁹⁾ to myocardial infarct.

The second important findings are the appearance of similar lesions by the administration of glycogen, dextran, and kaolin in the dose, by which several host responses, i.e. the decreasing of circulating platelets and leucocytes and the adrenaline sensitizing effect, have been shown to be induced.

The invasion of high molecular substances, which have a property to cause the so-called "host response" of Landy¹⁾ and Shear including the injury of endothelial cells of the blood vessels, the precipitation of fibrinogen, the clumping of platelets, and the decrease of properdin level, may be easily considered to take place very often in the human and animals. Not only the infection of gram negative bacteria containing the bacterial polysaccharide, but many kinds of stress, which cause injuries of tissues, may cause the appearance of active high molecular substances including tissue polysaccharides or some antigen-antibody precipitates, which has been shown to be able to elicit the host response, in the general circulation. The appearance of atherosclerosis among the peoples, on whom a hypocholesterolemia was confirmed, and also among the infants is considered as a contradiction in the cholesterol concept of atherogenesis, though there have been proposed several explanations.

Also the rare and rather exceptional appearance of myocardial infarct, which is the most common complication of the advanced atherosclerosis of the human, in the experimental cholesterol-atherosclerosis, was also mentioned as an another contradiction against the cholesterol concept by many researchers.

The arteriosclerosis of the animals, treated by substances capable of eliciting the host response with or without adrenaline in this experiment, showed a closer similarity in its morphological characteristics and distribution to the human atherosclerosis and in addition it was commonly complicated with myocardial infarct and infarctlike lesions. Those damages were shown to be aggravated

not only by adrenaline but also by high fat diet with the increased similarity to human atherosclerosis which will be reported elsewhere.¹³⁾

Such evidences obtained by the authors may suggest the significance of the substances capable of eliciting host response as a new and important cause in atherogenesis of the human.

Summary

The sufficient dose of several high molecular substances and a suspensoid capable of eliciting host response, i.e. bacterial polysaccharide, dextran, glycogen, and kaolin, which were shown to cause definite decrease of circulating platelets and leucocytes and to elicit adrenaline sensitizing effect, induced atheroma-like lesions of arteries, especially of coronary arteries, and grossly visible myocardial infarct and infarctlike lesions of the heart by their repetitious administration in rabbits. The diet, by which the rabbits were fed, was low in fat.

The combined administration of adrenaline, (1 μ g per kg is sufficient dose), to those substances caused remarkable aggravation of the damages of the artery and of the heart, inducing sometimes giant transmural infarction with the local large coronary artery occluded.

The appearance of atheroma-like lesions of the artery combined with the myocardial infarct or infarctlike lesions found in this experiment, may suggest an existence of the other avenue in the atherogenesis beside the

high way of the cholesterol concept.

(Comm. by T. Fujita M.J.A. Oct. 1958)

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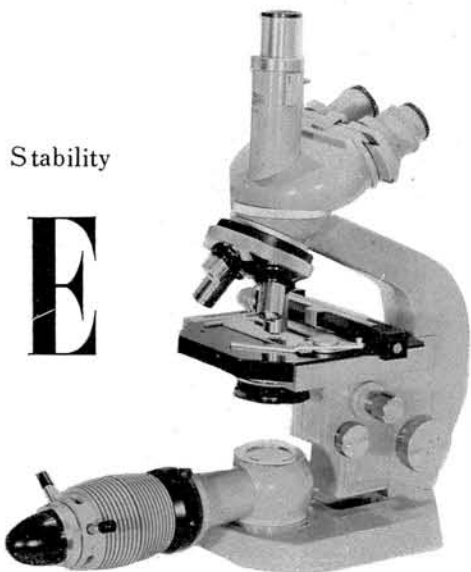
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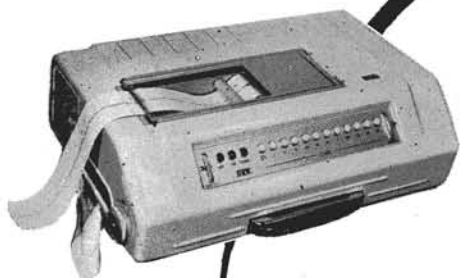
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Haemoglobin-H Trait in a Six Months Old Chinese Boy

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Department of Biochemistry, University of Malaya, Singapore.

&

F. PAUL M. B., B. S.,
Paediatric Unit, General Hospital, Singapore.

This is an instance observed in a six month baby, and the patient undergoes repeated infections, has low pigmentary and microspheric spanemia, is not responsive to chalybeate, and has developed hepatosplenomegaly. He cannot walk even in his full two years of age. Hemoglobin A+H and internal capsule can be verified by cataphoretic photography of acid responsive pH 6.5, and by BCB super vital staining in red blood corpuscles respectively. Abnormal hemoglobin was not found in his parents and brothers. This case is connected with hemoglobin-H Trait reported by Drs. Rigus and Goutas et al from 1955, and shows youngest one of reported cases.—Editor.

Haemoglobin-H was described almost simultaneously in two Chinese adult siblings in America by Rigas, Koler and Osgood (1955), and in seven Greeks, including a child eighteen months old by Gouttas, Fessas, Tsevrenis and Xefteri (1955). Minnich, Nakorn, Tuchinda, Wasi and Moore (1956) detected haemoglobin-H in the blood of nineteen cases of Thalassaemia in Thailand, the youngest patient being nine months old while Lie-Injo, Poey, Kho and Endenburgh (1957) reported five cases aged between 16 months and 6 years in two Chinese families in Indonesia. Over a period of fifteen months, 15 unrelated Chinese patients with anaemia in Singapore were found to be examples of haemoglobin-H trait (Vella, Ager and Lehmann, 1958).

Of the abnormal adult haemoglobin variants which have so far been described, haemoglobins-H and-I share the property of being the fastest on paper electrophoresis at pH 8.6 (veronal buffer). At an acid reaction (pH 6.5) haemoglobin-H has an anodal mobility (by virtue of its isoelectric point being pH 5.6) while all the other variants exhibit a cathodal mobility. Haemoglobin-H is characterised by the following additional

properties: 1) it is always associated with a disease state—a chronic, hypochromic, microcytic anaemia resistant to therapy, 2) it denatures irreversibly within a few days on freezing in the oxyhaemoglobin form, 3) it is associated with the presence of intracythrocytic inclusion bodies on supra-vital staining of erythrocytes containing it with Brilliant Cresyl Blue, 4) usually electrophoretic studies of the haemoglobin of the parents reveal no abnormal haemoglobins, though haematological investigations have usually shown one of the parents to have Thalassaemia.

The present communication records the finding of the haemoglobin-H trait in a Chinese boy at the age of six months, after he presented with pharyngitis, diarrhoea and anaemia.

Case Report

Simon T., a Chinese boy was admitted to the Paediatric Unit of the General Hospital, Singapore in April, 1957 when he was just six months old. He had been suffering from diarrhoea for one week.

On examination he was febrile (100°F), pale, dehydrated and acidotic. The anterior

fontanelle was depressed and the eyes sunken. The throat was injected but the tonsils were not enlarged. Physical examination of the heart and lungs revealed no abnormalities. The liver was not enlarged, and only the tip of the spleen was palpable. The stools were very loose, watery and bile stained, but contained no blood or mucus. He was diagnosed as 'pharyngitis with parenteral diarrhoea' and treatment was instituted with Penicillin and intravenous fluid therapy. The diarrhoea improved, the pharyngitis receded and the child became afebrile but he remained markedly pale. His anaemia was then investigated in full. Examination of the blood revealed: Haemoglobin 35% (M.R.C. Grey Wedge photometer), R.B.C. 2.14 million per cu.mm.; W.B.C. 9,800 per cu.mm. (Polymorph 66%, Lymphocyte 29%, Monocyte 5%, Eosinophil 0%). Peripheral blood smears showed hypochromia, anisocytosis and poikilocytosis of the erythrocytes and numerous target cells. Reticulocytes 2.5%. Thrombocytes 210,000 per cu.mm. The bone marrow showed marked erythroid hyperplasia. Bleeding time 3 minutes 15 seconds, clotting time 4 minutes 30 seconds. Osmotic Fragility: haemolysis began at 0.45% and was not complete at 0.10% NaCl. Blood Group 0, Rh positive (mother Blood Group 0, Rh positive). Direct Coombs's Test negative. No abnormal antibodies were detected in the serum. Serum bilirubin 0.4 mgms per 100 mls. Urine was negative for bile pigments, urobilinogen and urobilin.

Faeces were negative for occult blood, for *Ankylostoma* and for *Entamoeba histolytica*.

Radiological investigation of skull and hands showed no abnormalities.

Paper electrophoresis at pH 8.6 (veronal buffer, ionic strength 0.06) and at pH 6.5 (citrate buffer, ionic strength 0.05) between silicone treated glass plates as previously described (Brain and Vella, 1958) showed the haemoglobin to be composed of a mixture of haemoglobin-A (65%) and haemoglobin-H (35%). No haemoglobin-A₂ was noticed. Alkali resistant haemoglobin 2.5%. Supra vital staining with Brilliant Cresyl Blue by the method of Gouttas et al (1955) produced

inclusion bodies in most of the erythrocytes. A diagnosis of haemoglobin -H trait was made and the child was discharged after symptomatic treatment and an intravenous blood transfusion.

He was next seen as an out-patient in June 1957, during an attack of measles. Haemoglobin 40%, R.B.C. 2.73 million per cu.mm., reticulocytes 5.6%. Procaine Penicillin was given prophylactically. Two courses of Imferon, 1 c.c. for 5 days, were given without any improvement of the anaemia.

In March 1958, he was again admitted for cough, fever, loss of appetite and diarrhoea which had lasted over the previous week. Though he was now 17 months old he was still unable to walk but he could sit up well. Physical examination revealed the hard palate to be covered with numerous tiny bleeding ulcers. The lungs were clear and there was a haemic murmur over the precordium. The liver was palpable two fingers breadth and the spleen one finger breadth below the costal margin. Blood examination now showed: Haemoglobin 23%, R.B.C. 1.54 million per cu.mm., W.B.C. 8000 per cu.mm., (Polymorph 48%, Lymphocyte 34%, Eosinophil 17%, Monocytes 1%), Reticulocytes 1%. Peripheral blood smears again showed marked hypochromia, anisocytosis and poikilocytosis, numerous target cells and nucleated erythrocytes. Intra-erythrocytic inclusion bodies were again present on supra vital staining with cresyl blue and paper electrophoresis again showed haemoglobins-A and -H. X-Rays of skull and hands showed no abnormalities. The mouth ulcers were due to moniliasis and cleared up after glycerine mouth washes and painting with 1% gentian violet.

In May 1958, he was readmitted during a bout of fever and diarrhoea which had already lasted for three days. The throat was injected and the tonsils hypertrophied. The liver was now palpable three fingers breadth and the spleen two fingers breadth below the costal margins. Blood examination showed: Haemoglobin 28%, R.B.C. 1.73 million per cu.mm., W.B.C. 5400 per cu.mm. (Polymorphs 67%, Lymphocytes 24%, Eosino-

phils 4%, Monocytes 5%), Reticulocytes 1%; M.C.V. 63.5 cu. μ , M.C.H. 24.3 yy, M.C.H.C. 38.2%. Serum bilirubin 0.8 mgms %. The stools were negative for Salmonella and Shigella organisms and for Entamoeba. On culture, a throat swab showed Penicillin-insensitive Strep. viridans and Staph. albus. X-Rays of the skull and chest were normal; those of the hands were reported to show early reticulation in the phalanges. Treatment with Chloromycetin controlled the fever and diarrhoea, and following transfusion of 250 ccs of packed cells he was discharged.

He was last seen in August 1958 when he was readmitted after an attack of low grade fever, non-productive cough and diarrhoea lasting for about 4 days. His mother had decided to give him a trial of Chinese medicine during the previous three months. On examination he was febrile (101°F), dyspnoeic and markedly pale. His tonsils were hypertrophied, the heart enlarged, and the liver and spleen palpable three fingers breadth below the costal margins. A haemic systolic murmur was audible all over the praecordium. Haemoglobin 9%. He was treated with Penicillin and Digitalis and 200 ccs of packed cells intravenously. A further 200 ccs of packed cells were transfused the following day. The temperature, cough and diarrhoea were controlled within three days and his haemoglobin came up to 39% before he was discharged.

Though he was nearly two years old now he was not able to walk or talk yet and was able to stand only when supported.

Family History:

The patient was the seventh child of Singapore-born Chinese parents. He was full term and normal at birth (birth weight 7 lbs 3 ozs) and was brought up on Lactogen. There were three still-births and four live births. Both parents and the other three children showed only normal haemoglobin on electrophoresis. No immediate relatives of the parents were available for study. Haematological investigations on the family are shown in Table I.

Discussion

There is still some confusion as to the proper designation of the condition here described as haemoglobin-H trait. Motulsky (1956) called the condition "Thalassaemia-Haemoglobin-H Disease", and Minnich et al (1956) described it as "Inclusion Body Anaemia" and "Haemoglobin-H-Thalassaemia Disease." However, the Colonial Medical Research Committee's Working Party on Sickle-cell Trait and Sickle-cell Anaemia recommended that "The biochemical state involving Hb-A and any other one haemoglobin variant (Hb-X) should be described as Hb-X trait". Following this recommendation the condition is described as haemoglobin-H trait.

The association of haemoglobin-H in circulating erythrocytes with the clinical, haematological, radiological and genetic picture of Thalassaemia is now well established. In the absence of electrophoretic studies, patients carrying haemoglobin H would be diagnosed as Thalassaemia. The parents of patients with this abnormality usually exhibit no abnormal haemoglobins on electrophoresis and only mild haematological abnormalities suggestive of the Thalassaemia trait.

Goultas et al (1955) described one instance where haemoglobin-H could be demonstrated on paper electrophoresis in father and son. Six months after birth the offspring of the Gurkha woman described by Brain and Vella (1958) as having 35% of her total haemoglobin of the H type, exhibited no abnormal haemoglobin on paper electrophoresis. Minnich et al (1956) elicited inclusion body formation in three generations of one family studied; they did not state however whether haemoglobin-H could be detected on paper electrophoresis of the haemoglobin obtained from those individuals whose erythrocytes contained inclusion bodies. Paper electrophoresis is a relatively macro technique and it is possible that the production of inclusion bodies in some erythrocytes is specific for haemoglobin-H even when this abnormal haemoglobin is not detected on paper electrophoresis.

Haemoglobin-H has been found in Chinese patients (in America, Indonesia, Singapore and Malaya), in Thais, in a Malay, in a Greek Cypriot, in a Nepalese and in a Transjordanian (Vella, Wells, Ager and Lehmann, 1958). It has recently been described in a child of Italian parentage (Wolff, Michaels and Van Hofe, 1958) and it has been detected in several Malays in Singapore and Malaya (F.V. unpublished observations).

The anaemia in this patient is undoubtedly attributable to his having inherited two abnormal genes for haemoglobin synthesis, one for haemoglobin-H, the other for Thalassaemia. The periodic fever, pharyngitis, bronchitis and diarrhoea which prompt his admissions to hospital indicate a marked susceptibility to infection and together with the appearance of radiological abnormalities, increasing hepato-splenomegaly and severe anaemia make the prognosis rather poor.

The genes for Thalassaemia and haemoglobin-H are not uncommon amongst the Chinese. Investigation of anaemias in infants and children by the techniques of

electrophoresis and supra vital staining with cresyl blue should uncover more instances of this condition in children of Chinese or Mongoloid origin.

Summary

Haemoglobin-H trait was detected in a Chinese boy admitted for pharyngitis, diarrhoea and anaemia when he was six months old, by the technique of paper electrophoresis and supra vital staining with cresyl blue. Follow up for a period of sixteen months has shown the patient to have a marked susceptibility to infection, a severe anaemia reacting only partially to therapy, and an increasing hepato-splenomegaly.

Acknowledgements

We wish to thank Dr. Quah Quee Guan, Paediatric Specialist, General Hospital, Singapore, for her encouragement, Dr. Wong Hock Boon under whose care the patient has been during 1958 and the Director of Medical Services, Singapore, for permission to publish.

Table I. Results of Haematological Investigation in Family of S.T.

	SIMON (1st admission)	EDMUND (6 years old)	AMY (9 years old)	RAYMOND (2 years old)	MRS. T.
Erythrocytes. (million per cu.mm.)	2.14	4.14	4.12	3.12	3.89
Haemoglobin % (M.R.C. grey wedge photometer)	35	80	89	58	78
White cells per cu.mm.	9,800	5,200	8,300	7,900	6,400
Polymorphs %	66	64	67	54	69
Lymphocytes %	29	27	26	35	23
Monocytes %	5	5	4	7	6
Eosinophils %	0	4	3	4	2
Platelets per cu.mm.	210,000	200,000	250,000	200,000	200,000
Osmotic Fragility	Began at % NaCl	0.45	0.45	0.45	0.40
	Completed at % NaCl	0.10	0.25	0.30	0.20
Alkali denaturation %	2.5	2.34	1.54	1.25	1.4
Haemoglobin on Electrophoresis	A + H	A	A	A	A
Intra erythrocytic inclusion bodies	present	absent	absent	absent	absent

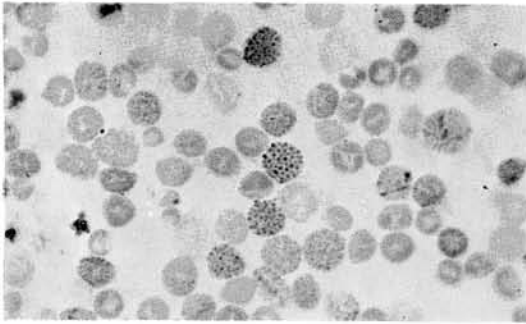


Fig. 1. Intra-erythrocytic inclusion bodies from Simon T. on supra vital staining with Brilliant Cresyl Blue.



Fig. 2. Simon T. aged 6 months (first admission).

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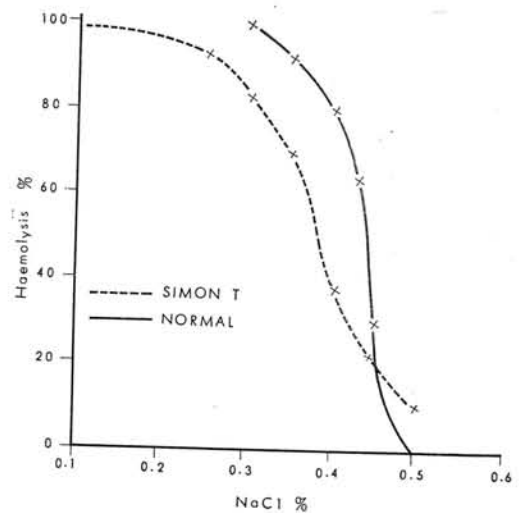


Fig. 3. Osmotic fragility curve of erythrocytes from Simon T.

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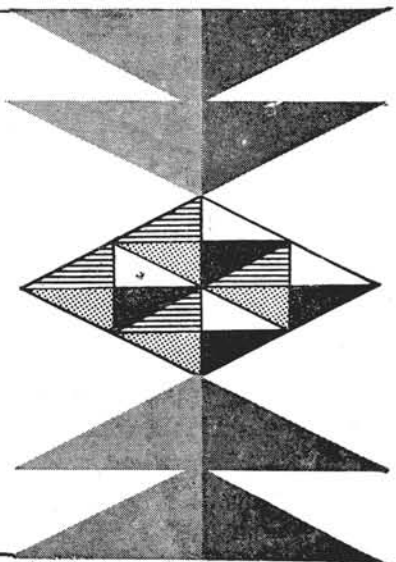
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Hamao Umezawa, M. D. *Prof. of Tokyo University*
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Antibacterial Antibiotics now in use have ample inhibitive effects upon Bacteria and some of Rickettsia, while these substances have no antifungal action upon *Candida*, *Aspergillus*, *Mucor* and *Cryptococcus*, a group which belongs to a genus of fungi, all of which causing Mycosis. Dyes, Photosensitizing dyes or Iodine drugs, having no Antifungal effect, have been ineffective for fundamental treatment, especially for the treatment of Deep Mycosis.

Discovery and frequent use of various broad spectrum Antibiotics including Penicillin, Streptomycin, etc., as well as the progress in the diagnosis of Mycosis, have brought to the fore the Mycosis and its therapy, providing new field of medicine. Research activities of various antifungal antibiotics together with those of Antibacterial Antibiotics have brought to clinical use the medicines such as Aureothricin and Tricomycin in Japan, and Nystatin (Squibb trade name is Mycostatin) and Amphotericin-B (Squibb trade name is Fungizone) in the United States. Among them Aureothricin have strong toxicity and is used only for treatment of Superficial Mycosis. Although Tricomycin and Nystatin are chiefly used for the treatment of Superficial Mycosis, Mycostatin, which is comparatively scarce in toxicity, is especially considered available for the treatment of Deep Mycosis. However, these Antibiotics, which are difficult to be dissolved in water, are not easily absorbed in blood. Therefore, in some patient, administration of Nystatin is liable to be ineffective as a chemotherapeutic medicine for Deep Mycosis. Recently discovered Amphotericin-B has a little toxicity, i.e., LD₅₀ 280-mg/kg (intraperitoneally) and even its injectable preparation was completed. However, this preparation has a great defect of being unstable as amorphous

powder.

Author et al have been in participation of the research activities of antifungal Antibiotics since 1950, and in 1954, we have already reported, by comparing ultra-violet absorption of Antibiotics in its methanol solution, that these antifungal Antibiotics can be classified into four groups of substance, viz., Fungicidine-Rimocidin-Ceromine group substance, Eurocidine group substance, Mediocidine group substance, and Trichomycin-Ascocidin-Candididin group substance. Considerable attention has been paid to the special therapeutic effects of the antifungal Antibiotic produced by *Streptomyces fungicidicus* U-10A strain which was named then and was separated from abovementioned group substances. And further studies have been made for the improvement of the strains, culture condition, its refining and extraction in cooperation with the laboratory-men of Showa Yakuhin Kako Co., Ltd. As a result, new type of antifungal Antibiotics called "Unamycin" were separated in crystal form for the first time so far as these Antibiotics are concerned.

In 1955, W. Orshnick et al insisted that this Antibiotic may be called "Polyene-antibiotic", the general appellation of Antibiotics having 4 to 7 conjugate double bond, and which have characteristic antifungal activity. Unamycin-A is one of tetraenes included in this category similar to Trichomycin, Nystatin and Amphotericin in its set-up. And it is one of Fungicidin-Rimecidin-Chromine group substances classified by the author et al. In addition to the Unamycin-A ingredient, Unamycin-10-A strain produces Unamycin-B which is limited in antifungal effects but is chiefly effective to *Candida*. Among antifungal Antibiotics hitherto discovered, only Polyeneantibiotics have been applied to clinical use. However

they are not crystallized. On the other hand, Unamycin-A and Unamycin-B are characteristic for their crystal form, that is to say, for their being single and pure in form. Their property of being soluble into water is one of the indispensable characteristic features for applying to therapy not only of Superficial Mycosis, but also of Deep Mycosis for their transferability into blood. Deficiency of toxicity is one of other properties suitable for application to therapy, viz., toxicity of Unamycin-A is over LD_{50} 250-mg/kg (intraperitoneally) and that of Unamycin-B is LD_{50} 20 to 25-mg/kg (intraperitoneally). The Fig. 1 shows main chemical

and physical properties of both Antibiotics. While Fig. 2 shows the difference in anti-fungal action to representative fungus between Unamycin-A, B, and other Antibiotics.

White needle crystals of Unamycin-A is soluble into water, and even if this aqueous solution is subjected to the heat of 90 degree C for 30 minutes, at pH 7.0 to 9.0, the potency of the solution is stable, and does not decrease. Putting together their anti-fungal action and scarcity of toxicity, both Unamycin-A and Unamycin-B are well-qualified of splendidly prospective future. Further experiments applied to animals and patients are now in execution.

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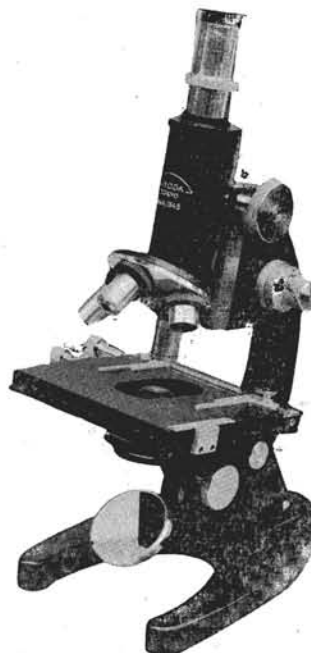


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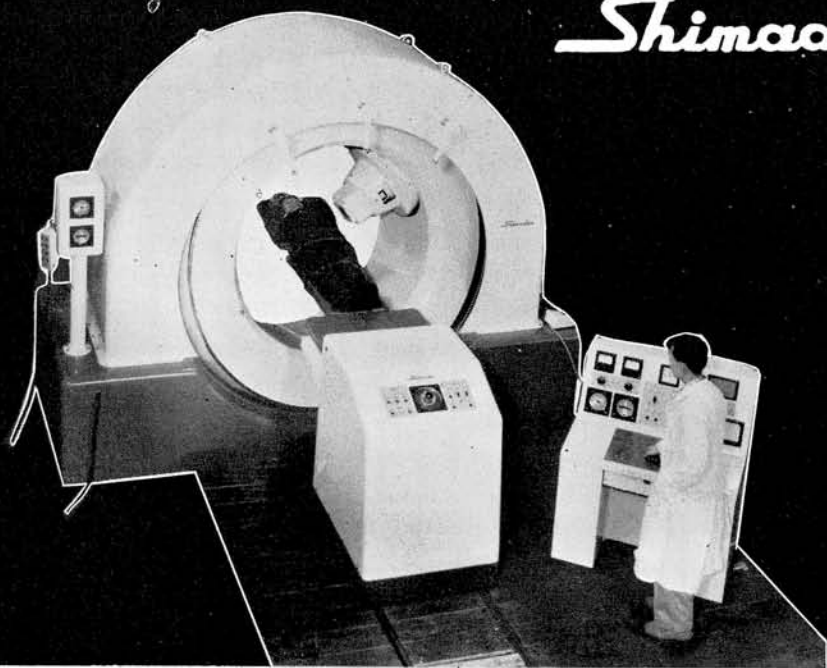
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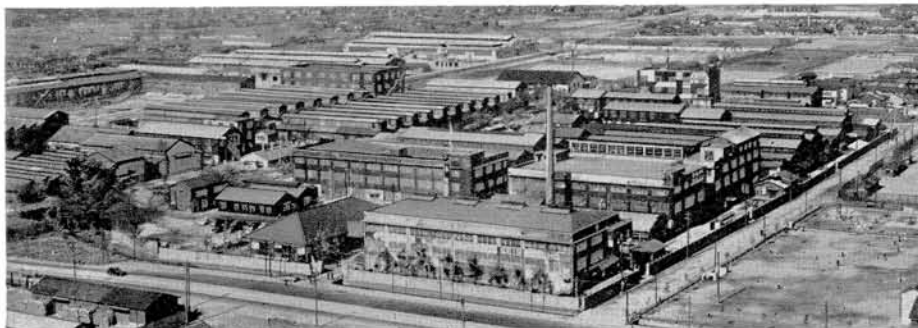


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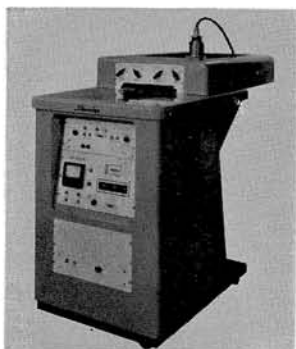
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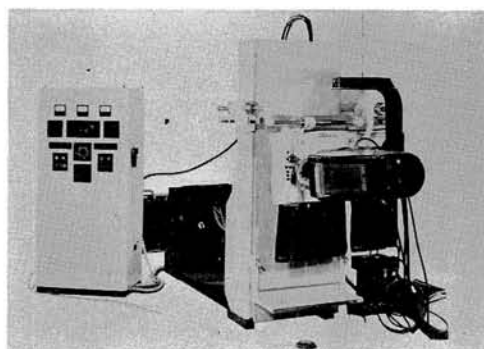
Fortunately, the enterprise got good hits of the time and the place, and in accordance with the continual development of the enterprise, the private firm was organized in the present form of a limited stock corporation in 1917 and its present paid-up capital is 15 milliard yens backed up by 4000 employees and 4500 machinery equipments, and the head office and 4 factories in Kyoto and branch offices in Tokyo, Osaka, Fukuoka, Nagoya, Sapporo and Hiroshima in the chief districts covering whole Japan.

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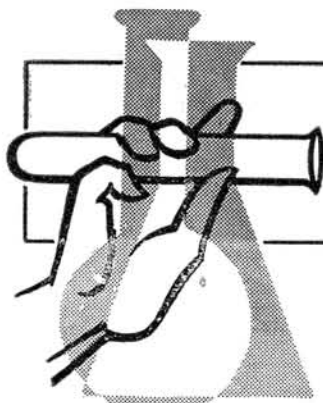
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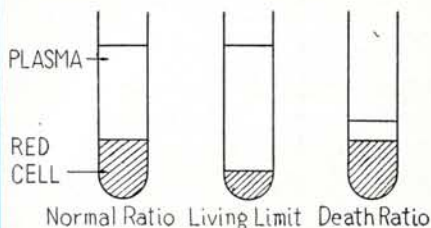
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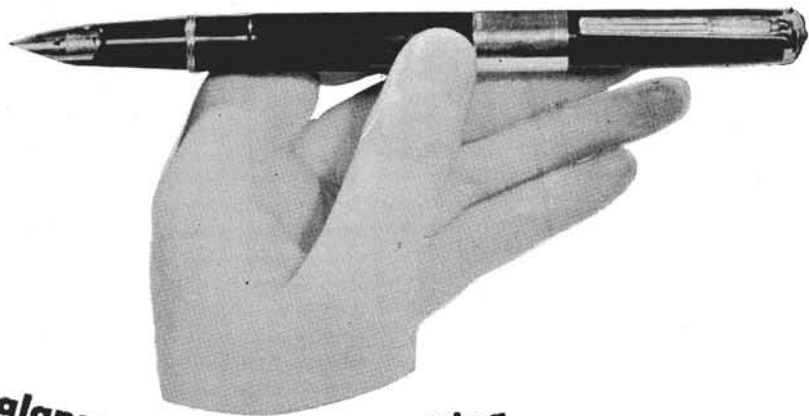


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What is the Minimal Dose of the Fluorine Producing Abnormal Calcification on the Rabbit's Dentine ?

Tasuku MIMURA

Department of Pharmacology, Faculty of Dentistry,
Tokyo Medical and Dental University, Tokyo

For the last ten years or more we have been engaged in the study of the formation and calcification of hard tissues, and the rabbit dentine was found to be the most sensitive tissues in testing the effects of the different kind of pharmacological drugs upon hard tissues.

Schour and Smith (1935) injected sodium fluoride subcutaneously into rats about 40-80 mg. per kilogram of body weight at one time and found out that the clear abnormal layers were produced in the enamel and dentine of the incisors and sometimes the disintegration of ameloblasts was discovered. These changes were considered, according to their opinion, to be the cause of mottled enamel. In 1940 we injected intravenously sodium fluoride 20 mg. per kilogram of body weight at one time into the rabbits, monkey and pigs respectively and we found the definite appearance of the abnormal layers in the growing enamel and dentine of each animal.

As stated above we have definitely found that the clear abnormal layers of enamel and dentine are produced by the administration of fluorides. On this experiment we have investigated the relationship between the quantity of fluorine given and its effect upon the formation of the dentine.

Rabbits were given intravenously as net dose of fluorine 0.1 mg./Kg., 0.2mg./Kg., 0.5mg./Kg., 1.0mg./Kg. and 2.0mg./Kg. respectively in the form of sodium fluoride.

In case of fluorine 0.2 mg./Kg. given, a different kind of abnormal thin layers were found very clearly, but in case of fluorine 0.1mg./Kg., no such change was noticed (Fig. 1). Therefore, the minimal dose of the intravenously injected fluorine to produce the abnormal thin layer of dentine was found to be between 0.2mg./Kg. and 0.1mg.-

/Kg. When 1.0mg./Kg. of fluorine was given orally, it produced a definite appearance of the abnormal layer in dentine, but when 0.5mg./Kg. of fluorine was given, it sometimes happened to produce an abnormal layer, so still the definite dose to produce an abnormal calcification of dentine was not yet determined (Fig. 2). From these findings, we can say definitely that the fluorides given orally are absorbed very quickly.

Also in an experiment on the puppies, 1.0 mg./Kg. of fluorine given orally produced the abnormal layers in the growing dentine and young enamel.

This kind of abnormal layer found in the dentine could also be detected in the hematoxylin stained specimens of the decalcified sections, but in the ground specimen these changes were found more easily.

It is presumed that the fluorine in the blood stream can be laid down in the abnormal layer as produced by this experiment, which is most likely to be composed of the calcium fluoride of fluoroapatite which are more resistant to acid. In order to prove the validity of this presumption the following experiment was performed.

The various surfaces of the teeth of the experimented animal were sectioned in different directions, well polished, and these surfaces were corroded by immersing them in the pH 4-5 degree of acetate buffer solution for 10-20 minutes. And then corroded surfaces of the sections were examined by the stereomicroscope.

The result of this experiment revealed the fact that the abnormal layer was much more resistant to acid than the normal dentine, the former more projecting than the latter. Furthermore, in order to make sure

that these projecting layers are made of inorganic substances, these specimens were boiled in potassium hydroxide and glycerine mixture so that organic substances were removed. By this procedure, the projecting layers, as expected, became more prominent (Fig. 3). The study on the chemical components of the abnormal layer is still in progress in our laboratory.

The width of the abnormal layer produced

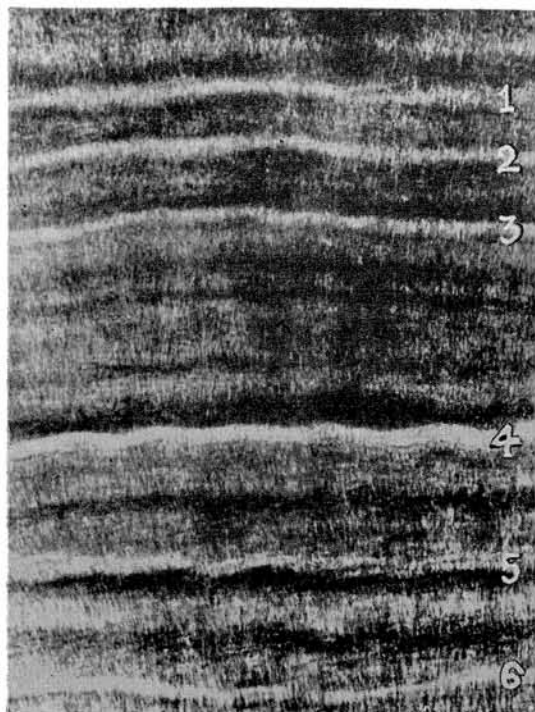


Fig. 1. Transverse ground section of lower incisor of rabbit. 1, 2 and 3 show the abnormal dentine layers produced by fluorine given 0.2 mg./Kg. intravenously and the interval of injection is 24 hours. 4, 5 and 6 show the abnormal layers produced by fluorine given 0.3 mg./Kg. intravenously and the interval of injection is 48 hours.

by relatively small amounts of fluorine was definitely smaller than one day's normal growth of the rabbit dentine (about 20-30 μ daily). Also from the another fact that the injection of such a small amount of fluorine gives no growth disturbance to the dentine, the small amount of fluorine can be utilized for the time recording of the formation of hard tissues of growing dentine and enamel.



Fig. 2. Transverse ground section of lower incisor of rabbit. 1, 2, 3,.....9 show the abnormal dentine layers produced by fluorine administrations. 1 shows the layer produced by fluorine given 0.4 mg/Kg. intravenously, 2, 3, 8 and 9 show the layers produced by fluorine given 1.0 mg./Kg. orally, 4 and 5 show the layers produced by 2.0 mg./Kg. orally, and 7 shows the layer produced by 3.0 mg./Kg. orally.

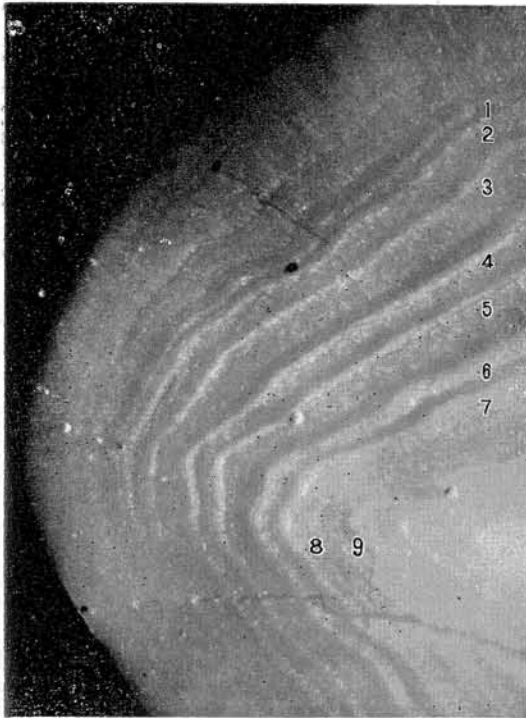
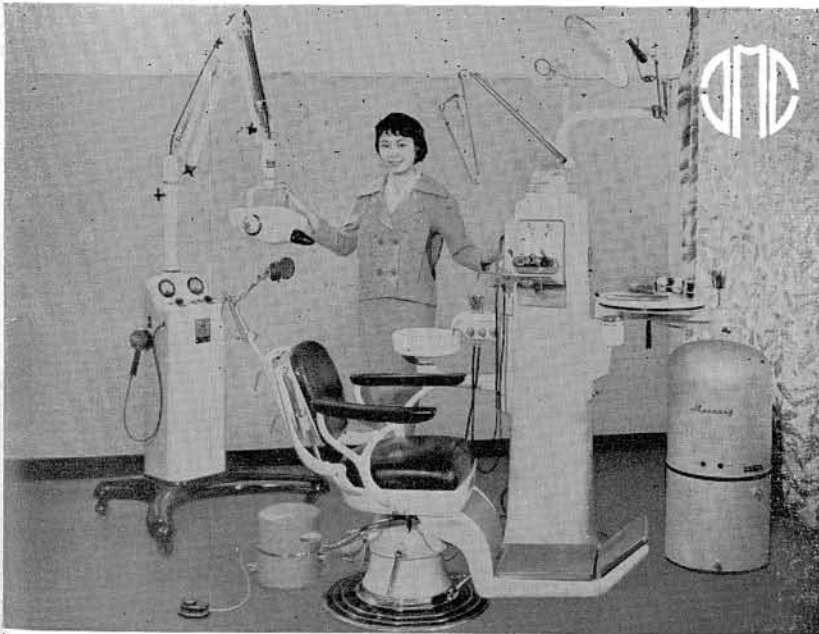


Fig. 3. Transverse section of lower incisor of rabbit observed by reflected light which was referred in Fig. 2. The polished surface was corroded by being immersed in acetate buffer pH 4.7 for 15 minutes and then boiled in KOH-glycerine mixture for 2 hours in order to remove organic substances. 1, 2, 3,.....9 showing the abnormal dentine layers in Fig. 3 correspond with the same number in Fig. 2.

References

Schour, I. and Smith, M. C.: Mottled Teeth, an Experimental and Histologic Analysis, J. Am. Dent. A. 22, 796-813 (1935).
 Okada, M., Mimura, T. and Fuse, S.: Zur Physiologie und Pharmacologie der Hartgewebe. VI. Mitteilung: Eine Methode der pharmacologischen Untersuchung durch die Anwendung von Streifenguren im Kaninchendentin und eine Beobachtung über die Wirkung einiger Pharmaka durch dieselbe Methode, Jap. J. of Med. Sci, IV. Pharmacol. 13, 99* (1940).



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**AGENDA OF SCIENTIFIC MEETINGS OF THE 15th
GENERAL ASSEMBLY OF
THE JAPAN MEDICAL CONGRESS**

(Based on the second publication, but subject to subsequent changes.)

April 1, (Wed.) Afternoon.

Subject 1. History of Medicine, Medical Education. (3 hours). (place—Sabo Kaikan)
Chairman (chief) Koichi Uchiyama, (Nihon Univ., physiology)

- A. Historical consideration of education of Occidental medicines in Japan.
1. History of education of Occidental medicines in the Edo Shogunate Era. Tasuku Yamazaki (Society of Japan History of Medicine) (20 minutes)
 2. History of education of Occidental medicines in the Kansai District. Misao Nakano, (ditto) (20 minutes)
 3. Education of medicine undertaken by foreign physicians who came to Japan. Ransaburo Otori (Keio Univ., School of Medicine) (20 minutes)
 4. Text books used for education of Western medicine in the Edo period. Akira Ishihara (Yokohama City Univ., School of Medicine) (20 minutes)
- B. Invited lectures:
1. History of Medicine and Medical Education. Tsung Min Tuh (Kao Hsiung College of Medicine, Formosa) (30 minutes)
 2. The evolution of medical education in the United States. I. Veith (Cicago Univ., America) (30 minutes)
 3. Die medizinische Ausbildung in Deutschland nach dem Zweiten Weltkrieg. W. Bargmann (Kiel Univ., Germany) (30 minutes)

Subject 2. Recent Studies on Microscopic Structures of Cells and their Functions.
(3 hours) (place—Tokyo Univ., School of Medicine, Auditorium)
Chairman (chief) Shigeyasu Amano (Kyoto Univ., Virus Laboratory)
Nobejiro Takizawa (Chief of the 6th Section)
Ken Nakao (Chief of the 16th Section)

- A. Basic structure and Mecanism of Mitosis of nucleus. Shigeyasu Amano (Kyoto Univ., Virus Laboratory) (25 minutes)
- B. Pathomorphological introduction of Mitochondria. Bunichi Takagi (Jikei-kai College of Medicine, Pathology) (25 minutes)
- C. Endoplasmic reticulum. Yonosuke Watanabe (Keio Univ., pathology) (25 minutes)
- D. Submicroscopic structures of Nucleus of Germ Cell. Gonpachiro Azumi (Nara Univ., Anatomy) (25 minutes)
- E. Bacteria in special reference acid-fast bacilli. Kenji Taketani (Kyushu Univ., Bacteriology) (25 minutes)

- F. Glycogen granule. Osamu Ichikawa (Livestock Hygiene Experiment Station) (25 minutes)
- G. Invited lecture: E. V. Cowdry (St. Louis Washington Univ., America) (30 minutes)
The aging of cells.

Subject 4. Anthropology of the Japanese. (3 hours) (place—Tokyo Univ., Dept. of Science, No. 2 Bldg.)

Chairman (chief) Masaharu Arai (Jikei-kai College of Medicine, Anatomy)
Kunizo Fukuda (Chief of the 13th Section)
Tsuneo Kono (Chief of the 13th Section)

- A. Anthropometric characteristics of the Japanese. Yutaka Imamura (Niigata Univ., Anatomy) (20 minutes)
- B. The Japanese in the Yayoi-shiki Period of ancient Japan. Takeo Kanazeki (Kyushu Univ., Anatomy) (20 minutes)
- C. The Japanese in the Kamakura Period of medieval Japan. Hisashi Suzuki (Tokyo Univ., Anthropology) (20 minutes)
- D. Comparative Study on Morphology of Cerebral Sulci between the Japanese and Ainu people. Sakuzaemon Kodama (Hokkaido Univ., Anatomy) (20 minutes)
- E. Comparison of Ainu people to the Japanese. Mototsugu Obama (Osaka Univ., Anatomy) (20 minutes)
- F. The change in physical conditions of the Japanese. Sadamasa Shigeta (Tokyo Univ., Liberal Arts School) (20 minutes)
- G. Physical conditions of the Japanese born in America. Fusao Ishihara (Social Insurance Central General Hospital) (20 minutes)

Subject 5. Medical Aspects of Sports—Pros. & Cons. (3 hours) (place—Choson Kaikan)

Chairman (chief) Reiji Natori (Jikei-kai College of Medicine, Physiology)

Takehiko Tozuka (Chief of the 3rd Section)
Ryosuke Katayama (Chief of the 25th Section)

- A. Physiological side. Ryoichi Sugimoto (Jikei-kai College of Medicine, Physiology) (40 minutes)
- B. Hygiene side. Isaburo Shirai (Showa College of Medicine, Hygiene) (40 minutes)
- C. Side from Internal Medicine. Toshiro Azuma (Juntendo School of Medicine, Internal Medicine) (40 minutes)
- D. Surgical side. Shiro Mizumachi (Yokohama Univ., Orthopedics) (40 minutes)

Subject 7. Problems of Silicosis in Japan. (3 hours) (Place—Tokyo Univ., School of Law, No. 25 Room)

Chairman (chief) Shinji Katsuki (Chief of the Institute for Scientific Research of Labour)

Shukichi Matsuoka (Chief of the 36th Section)
Jiro Ishida (Chief of the 20th Section)

- A. Problem of Silicosis in Japan. Kotoku Kato (Labor Standards Bureau, Ministry of Labor) (30 minutes)

- B. Pathology of Silicosis. Kaneyoshi Akazaki (Tohoku Univ., Pathology) (30 minutes)
- C. Clinic of Silicosis. Takashi Nakamura (Tohoku Univ., Internal Medicine) (30 minutes)
- D. Types and Pathogenesis of Pneumoconiosis. Tatsuo Sano (Institute for Scientific Research of Labor, Pathology) (30 minutes)
- E. Asbestosis. Zenji Horai (Nara Univ., Internal Medicine) (30 minutes)

Subject 8. Intoxications in Daily Life. (3 hours) (place—Tokyo Univ., School of Laws, No. 31 Room)

Chairman (chief) Susumu Harashima (Keio Univ., Hygiene)
Shokichi Ueno (Chief of the 11th Section)
Etsuzo Komiya (Chief of the 17th Section)

- A. Toxicity of Mouldy Rice. Kenji Uraguchi (Tokyo Univ., Pharmacology) (20 minutes)
- B. Toxicity and Detoxication of agricultural drugs for Human. Kiichi Ueda (Tokyo Dental College, Hygiene) (20 minutes)
- C. Simple detecting methods for Organic Phosphoru. Kansuke Sera (Kumamoto Univ., Hygiene) (20 minutes)
- D. Research methods of chronic poisonings. Susumu Harashima (Keio Univ., Hygiene) (15 minutes)
- E. Cyanide poisoning and Shinshu myocardiosis. Tomisaburo Komatsu (Shinshu Univ., Hygiene) (20 minutes)
- F. Poisoning due to organic solvents, especially benzol. Masashichi Nishio (Kyoto Univ., Public Hygiene) (20 minutes)
- G. Studies on Dye intermediate poisoning. Shigetaka Kubota (Institute for Scientific Research of Labor, Pathology) (20 minutes)
- H. Invited lecture: K.K. Chen (Lily Institute, U.S.A.)
Treatment of cyanide poisoning. (20 minutes)

Subject 9. Problems of public nuisances in large cities. (3 hours) (place—Gakushi Kaikan)

Chairman (chief) Kiyoshi Saito (Head of National Institute of Public Hygiene)
Saburo Kiguchi (Chief of the 38th Section)
Hikozaemon Hazato (Chief of the 12th Section)

- A. Contamination of Atmosphere. Takeo Suzuki (National Institute of Public Hygiene) (25 minutes)
- B. Contamination of water.
1. Pollution of Drinking water. Motomasa Nagao (Institute of Hygiene, Tokyo) (20 minutes)
 2. Industrial Waste Water of Factories. Isamu Dozawa (National Institute of Public Hygiene) (20 minutes)
 3. Contamination of Sea water. Umichi Miura (Kyoto Univ., Hygiene) (20 minutes)

- C. Noises. Hikaru Shoji (Osaka City Univ., School of Domestic Science) (25 minutes)
- D. Public Nuisance with Radioactive Waste. Yoshio Hiyama (Tokyo Univ., Fishery Science) (25 minutes)

Subject 12. Nutrition (Problems of Nutrition in Asian Countries) (3 hours)

(place—Sankei International Hall)

Chairman (chief) Minoru Hara (Keio Univ., Institute of Foodstuffs)
(chief) Kintaro Yanagi (Tokyo Medical and Dental College, Internal Medicine)
(chief) Haruhisa Yoshikawa (Tokyo Univ., Nutrition)

- A. Nutritive Status of the Japanese and its future prospect. Toshio Oiso (Ministry of Health & Welfare, Public Hygiene) (20 minutes)
- B. Deficiency and its Improvement for protein Nutrition in Asian peoples, particularly the Japanese. Hisato Yoshimura (Kyoto Prefectural Univ., Physiology) (20 minutes)
- C. Nutrition problems in the Philippines. C. R. Pascual (Institute for Research of Nutrition, Philippines) (20 minutes)
- D. Topic undecided. F. E. Howe (National Institute for Research of Hygiene) (20 minutes)
- E. Vegetable Protein as Cow's Milk Substitute. N. Patwardhan (Council of Medicine, India) (20 minutes)
- F. The Community: An Element in Improved Nutrition. P. Soedarmo (Ministry of Health & Welfare, Indonesia) (20 minutes)

Subject 24. Problems in Immunity. (3 hours) (place—Shigaku Kaikan)

Chairman (chief) Koji Ando (Jikei-kai College of Medicine, Bacteriology)
Yasuichi Nagano (Chief of the 44th Section)
Tomoichiro Akiba (Chief of the 9th Section)

- A. Mechanism of Action of Neutralizing Antibody in Bacteriophage. Yasuichi Nagano (Institute for Research in Infectious Diseases) (25 minutes)
- B. Capsular Antigen and Immunity of Whooping Cough Bacillus. Tadayoshi Kasuga (Kitazato Institute) (25 minutes)
- C. Influence of Antibody upon Proliferating Process of Virus in Cells. Juntaro Kamahora (Osaka Univ., Institute for Research of Microzoaria) (25 minutes)
- D. Immunity in Experimental Typhoid. Daizo Ushiba (Keio Univ., Bacteriology) (25 minutes)
- E. Consideration upon Immunity. Tomio Ogata (Tokyo Univ., Serology) (25 minutes)
- F. Invited lecture: F. Hoff (Frankfurt Univ., Germany) (30 minutes)
Über unspezifische Abwehrvorgänge.

Subject 27. Invasion and Vital Response. (3 hours) (place—Auditorium of School of Dentistry, Nihon Univ.)

Chairman (chief) Yoshio Oshima (Tokyo Univ., Physical Therapy)
Yoshio Mikamo (Chief of the 43rd Section)
Seiji Kimoto (Chief of the 22nd Section)

- A. Invasion and Generation of Fever. Sadataka Tasaka (Tokyo Univ., Internal Medicine) (30 minutes)
- B. Bacterial Toxin and Vital Responses (Occurrence of Arterial and Myocardial Hazards). Takio Shimamoto (Tokyo Medical and Dental College, Clinical Physiology) (30 minutes)
- C. Physical Obstructions and Vital Responses.
1. Meteorological and Climatic Factors and Vital Responses. Motosaburo Masuyama (Tokyo Univ., Physical Therapy) (30 minutes)
 2. Hot Spring and Vital Responses. Aki Hatta (Kyushu Univ., Institute for Research of Hot Spring, Beppu) (30 minutes)

Subject 38. Tumors: (1) Biochemistry of Cancer. (3 hours) (place—Yomiuri Hall)
 Chairman (chief) Waro Nakahara (Institute for Research of Cancers)
 Yorio Shimazono (Chief of the 4th Section)
 Shigeo Okinaka (Chief of the 8th Section)

- A. Mechanism of Development of Cancers. Waro Nakahara (Institute for Research of Cancers) (30 minutes)
- B. Cancerous Alternation of Mucoprotein and Mucopolysaccharide. Hajime Masamune (Tohoku Univ., Physiological Chemistry) (30 minutes)
- C. Nucleicacidase Metabolism of Nucleic Acid of Cancer Cells. Yoshiaki Miura (Tokyo Univ., Physiological Chemistry) (30 minutes)
- D. Histochemistry of Cancer. Hideo Takamatsu (Kyoto Univ., Institute for Research of Tuberculosis) (30 minutes)

Subject 42. Tumors: (5) Cancer of the Lung. (3 hours) (place—Sankei Hall)
 Chairman (chief) Naoji Kawai (Chiba Univ., Surgery)
 Tsuneaki Nakayama (Chief of the 46th Section)
 Tomizo Yoshida (Chief of the 7th Section)

- A. Incidence of Cancer of the Lung.
1. General Statistics. Mitsuo Segi (Tohoku Univ., Public Hygiene)
 2. Morbid Anatomical Statistics and Classification from Pathological Viewpoint. Toru Miyaji (Osaka Univ., Pathology)
- B. Relationship of Cigarette to Lung Cancer.
1. Biochemical Consideration Ethnology and Pathogenesis of Lung Cancer. Morizo Ishidate (Tokyo Univ., Pharmacology)
 2. Ethnology of Cancer of the Lung (from pathological standpoint) Kunio Ota (Tokyo Medical and Dental College, Pathology)
- C. Clinic of Cancer of the Lung.
1. Side from Internal Medicine. Hiomi Honma (Tokyo Univ., Internal Medicine)
 2. From Surgical Side. Naoji Kawai (Chiba Univ., Surgery)

- D. Invited lecture: E. Wynder (New York Memorial Centre,
Toward the Solution of the Tobacco U.S.A.) (30 minutes)
Cancer Problem.

Subject 55. Problems in Massive Blood Transfusion. (3 hours)

(place—Kudan Kaikan Hall)

Chairman (chief) Tamotsu Fukuda (Juntendo College of Medicine,
Surgery)

Hideo Yamamura (Chief of the 45th Section)

Kunio Kawaiishi (Chief of the 48th Section)

- A. Massive Blood Transfusion and a measure to cope with consequent hemorrhage. (25 minutes)
Morio Kasai (Tohoku Univ., Surgery)
Shigeru Sakakibara (Tokyo Women's College of Medicine, Surgery) (25 minutes)
(Especially Blood Movement in Massive Blood Transfusion and its Effect upon Living Body) Kenji Kawamura (Kyoto Prefectural Univ., Surgery) (25 minutes)
Terutake Sunada (Okayama Univ., Surgery) (25 minutes)
Kunisuke Tokuzawa (Gumma Univ., Surgery) (25 minutes)
- B. Disturbance and especially True Form of Vasoconstriction caused by Transfusion of Preserved Blood (25 minutes)
Mitsumasa Hoshikawa (Imperial Household Agency Hospital, Surgery)

Subject 64. Diseases of Urinary Tract. (3 hours) (place—Chiyoda District Hall)

Chairman (chief) Takamitsu Kusu (Osaka Univ., Urinology)

(chief) Hajime Tamura (Keio Univ., Urinology)

Tokuji Ichikawa (Chief of the 30th Section)

Masaomi Ishikawa (Chief of the 26th Section)

- A. Calculosis of Urinary Tract. (Chairman) Takamitsu Kusu (Osaka Univ., Urinology)
1. Treatment for Urolithiasis in Upper Urinary Tract. Akira Harada (Yokohama Univ., Urinology) (20 minutes)
 2. Japanese Statistics of Urolithiasis and Consideration of its Pathogenesis. Tsutomu Inada (Kyoto Univ., Urinology) (20 minutes)
 3. a. Influence of Various Drugs upon Experimental Nephrocalcinosis and Urolithiasis. Noboru Yano (Mie Univ., Urinology) (20 minutes)
 - b. Results Adrenal and Autonomous Nervous System Function in Urolithial Patients.
- B. Invited lecture: Pathogenese und Präventive Behandlung der Urolithiasis. C. E. Alken (Hongburg, Saar Univ., Germany) (30 minutes)
- C. Malignant Tumors of Urinary Tract. (Chairman) Hajime Tamura (Keio Univ., Urinology) (10 minutes)

1. Tumors and Hormone. Tokuji Kato (Hiroshima Univ., Urinology)
(20 minutes)
 2. Malignant Tumors of Urinary Tract Shudo Takai (Sapporo Univ., Urinology)
(Radioactive Therapy and Chemo-
therapy of Bladder Tumors) (20 minutes)
 3. Pathology and Clinic of Vesical Ichiro Fuji (Hokkaido Univ., Urinology)
Tumors. (20 minutes)
- Subject 82. Neurosurgery. (3 hours)** (place—Kyoritsu Auditorium)
- Chairman (chief) Chisato Araki (Kyoto Univ., Surgery)
(chief) Kentaro Shimizu (Tokyo Univ., Surgery)
(chief) Torai Iwahara (Keio Univ., Orthopedics)
Taiei Miura (Chief of the 23rd Section)
- A. Functional Neurosurgery. (Chairman) Chisato Araki (Kyoto Univ.,
Surgery)
 1. Psychosurgery. Sadao Hirose (Matsuzawa Hospital)
(15 minutes)
 2. Stereotactic Pallidotomy and Ven-
tro-lateral Thalamotomy for Extra-
pyramidal Diseases. Hirotaro Narabayashi (Juntendo College of
Medicine, Neurology) (10 minutes)
 3. Hemispherectomy. Komei Ueki (Niigata Univ., Neurosurgery)
(10 minutes)
 4. Surgery of Epilepsy. Kentaro Shimizu (Tokyo Univ., Surgery)
(10 minutes)
 5. Experiences in Surgical treatment
for Epilepsy. Chisato Araki (Kyoto Univ., Surgery)
(10 minutes)
 - B. Discussions on Head Injury. (Chairman) Kentaro Shimizu (Tokyo Univ.,
Surgery)

Chisato Araki (Tokyo Univ., Surgery)
Tsuneo Imura
Tatsuyuki Kudo (Keio Univ., Surgery)
Tosuhō Konuma (Hiroshima Univ., Psy-
chiatry)
Shunshiro Kondo (Tokyo Workmen's Ac-
cident Hospital)
Kentaro Shimizu (Tokyo Univ., Surgery)
Nozomu Suwa (Hokkaido Univ., Psychia-
try)
Haruo Akimoto (Tokyo Univ., Psychiatry)
(20 minutes)
 - C. Surgery of Spinal Cord. (Chairman) Torai Iwahara (Keio Univ.,
Orthopedics) (12 minutes)
 1. Spinal Cord Tumors. Tamikazu Amako (Kyushu Univ., Ortho-
pedics) (16 minutes)
 2. Spinal Cord Injuries. Shotaro Mizuno (Osaka City Univ., Ortho-
pedics) (16 minutes)
 3. Hernia of Intervertebral Disc. Eishi Kondo (Kyoto Univ., Orthopedics)
(16 minutes)

April 2, (Thurs.) Afternoon.

Subject 6. Health Control. (3 hours) (place—Tokyo Univ., School of Medicine,
Main Bldg., Auditorium)

Chairman (chief) Kiyoshi Saito (Chief of National Institute of
Public Hygiene)

Shinji Katsuki (Chief of the 40th Section)

Shukichi Matsuoka (Chief of the 36th Section)

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|--|--|--------------|
| A. Health Control of Educational Institutions. | Mitsugu Uramoto (Seijo Univ.,) | (20 minutes) |
| B. Health Control of Universities. | Naoyuki Miyata (Kyoto (Univ.,) | (25 minutes) |
| C. Occupational Health. | Shinji Katsuki (Institute for Research of Labour) | (25 minutes) |
| D. Health Control of Territorial Community. | Kunio Tsukahara (Tokyo Univ., Public Hygiene) | (25 minutes) |
| E. Basic Problem of Health Control of Women (Researches upon Individual wave of living). | Shoji Matsuda (Hokkaido Univ., Obstetrical Gynecology) | (20 minutes) |
| F. Basic Problems on Methods of Health Control. | Haruo Katsunuma (Tokyo Univ., Public Hygiene) | (20 minutes) |

Subject 10. Disposition, Heredity and Growth. (3 hours) (place—Choson Kaikan)

Chairman (chief) Kunizo Fukuda (Chief of the 13th Section)

Tsuneo Kono (Chief of the 31st Section)

Kintaro Yanagi (Chief of the 14th Section)

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|--|--|--------------|
| A. Development of Disposition. | Shigeki Mori (Yamaguchi College of Medicine) | (20 minutes) |
| B. Medical Researches on Twins. | | |
| 1. Anatomical Side. | Toratoshi Taniguchi (Keio Univ., Anatomy) | (30 minutes) |
| 2. Psyatric Side. | Eiji Inoue (Juntendo College of Medicine, Psychopathology) | (20 minutes) |
| 3. Bodily Diseases in the Twins. | Riichiro Mikami (Tokyo Univ., Internal Medicine) | (20 minutes) |
| C. Growth of the Japanese. | Hatao Funakawa (Public Hygiene Hospital) | (30 minutes) |
| D. Development of functions of the Human Body. | Sakae Yokobori (Toho College of Medicine) | (30 minutes) |

Subject 13. Metabolism (1) Problems in Biochemistry. (3 hours)

(place—Tokyo Univ., School of Laws, No. 25 Room)

Chairman (chief) Yorio Shimazono (Tokyo Univ., Biochemistry)

Katsuo Akagi (Chief of the 10th Section)

Etsuzo Komiya (Chief of the 17th Section)

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|-----------------------|---|--------------|
| A. Cytochrome Enzyme. | Kazuo Okunuki (Osaka Univ., Physical Science) | (60 minutes) |
|-----------------------|---|--------------|

- B. Functional Specificity of Hemoglobin and Decomposition of Heme Analysis. Kozo Kaziro (Nihon College of Medicine, Biochemistry) (40 minutes)
- C. Invited lecture: Vitamin E and hemolysis. P. György.
- D. Metabolism of propionic acid in animal tissues. S. Ochoa (New York College of Medicine, U.S.A.)

Subject 18: Internal Secretion (1) Metabolism of Steroid Hormones. (3 hours)

(place—Sabo Kaikan)

Chairman (chief) T. Nakao (Jikei-kai College of Medicine, Pharmacology)

Masaomi Ishikawa (Chief of the 26th Section)

Hiroshi Kumagai (Chief of the 5th Section)

- A. Metabolism of several Corticosteroids in vivo. Ken Nakao (Jikei-kai College of Medicine, Pharmacology) (20 minutes)
- B. Invited lecture:
1. Uber die Entwicklung auf dem Gestagengebiet. K. Junkmann (Shaling Laboratory, Germany) (40 minutes)
 2. Biosynthesis of androgens & estrogens. R. I. Dorfman (Worseter Laboratory, U.S.A.) (40 minutes)
 3. The Metabolism of Corticosteroids. G. Pincus (Worseter Laboratory, U.S.A.) (40 minutes)

Subject 22. Infection and Inflammation (1) Infection. (3 hours)

(place—Tokyo Univ., College of Science, No. 2 Bldg.)

Chairman (chief) Tomoichiro Akiba (Tokyo Univ., Bacteriology)

Jiro Ishida (Chief of the 20th Section)

Hikozaemon Hazato (Chief of the 12th Section)

- A. Virus Attacks. Taiichi Nagano (Institute for Research of Infectious Diseases) (20 minutes)
- B. Bacterium Infection and Virus Infection. Airo Kawakita (Chiba Univ., Bacteriology) (20 minutes)
- C. Host-parasite Relationship in Bacterial Infectious Diseases. Daizo Ushiba (Keio Univ., Bacteriology) (20 minutes)
- D. Systematic Tissue Response and Pathology in Infection. Atsushi Okabayashi (Chiba Univ., Pathology) (20 minutes)
- E. Animals and Infection. Koji Ando (Jikei-kai College of Medicine, Bacteriology) (20 minutes)

Subject 31. Cold-Like Viral Diseases. (3 hours)

(place—Shigaku Kaikan)

Chairman (chief) Saburo Kojima

Y. Nagano (Chief of the 44th Section)

Yoshio Oshima (Chief of the 15th Section)

- A. Pathogenesis. (Etiological Aspects of Common Cold-Like Diseases.) Hideo Fukumi (Institute for Research of Preventive Hygiene) (30 minutes)
- B. Epidemiology of Common Cold-Like Diseases. Yu Hirayama (National Institute of Public Hygiene) (25 minutes)

- C. Pathology. Nobuo Kusano (Institute for Research of Infectious Diseases) (25 minutes)
- D. Clinic of Cold-Like Viral Diseases. Osamu Kitamoto (Institute for Research of Infectious Diseases) (40 minutes)

Subject 41. Tumors: (4) Cancer of Digestive Tract. (3 hours) (place—Yomiuri Hall)
 Chairman (chief) Shinichi Kawashima (Kawashima Clinic)
 Tsuneaki Nakayama (Chief of the 7th Section)
 Tomizo Yoshida (Chief of the 46th Section)

- A. Statistical Observation of Cancer of Digestive Tract. Mitsuo Segi (Tohoku Univ., Public Hygiene) (25 minutes)
- B. Pathology of Gastric Cancer, Ulcer and Inflammation. Kunio Ota (Tokyo Medical and Dental College, Pathology) (25 minutes)
- C. Treatment for Esophagus Cancer. Tsuneaki Nakayama (Chiba Univ., Surgery) (25 minutes)
- D. Treatment for Gastric Cancer of the Stomach. Motoo Muto (Tohoku Univ., Surgery) (25 minutes)
- E. Surgical Treatment for Pancrease Cancer. Hajime Yoshioka (Police Hospital, Surgery) (25 minutes)
- F. Invited lecture:
 Developments in the Treatment of Cancer of the Stomach at the Mayo Clinic since 1907. W. Walters (Mayo Clinic, U.S.A.) (30 minutes)
 Cytodiagnostik des Krebses im Bereich des Verdauungstraktes. N. Henning (Germany)

Subject 49. Syphilis (1) Epidemiological Studies on Syphilis. (3 hours)
 (place—Tokyo Univ., College of Laws, No. 31 Room)
 Chairman (chief) Shumpei Yamamoto (Kyoto Univ., Dermatology)
 Kanehiko Kitamura (Chief of the 28th Section)
 Ichiro Kirikae (Chief of the 28th Section)

- A. Epidemiological Studies on Syphilis in Hokkaido District. Kenzo Iwashita (Kyoto Prefectural Univ., Dermatology) (18 minutes)
 Yusho Miura (Hokkaido Univ., Dermatology) (18 minutes)
- B. Epidemiological Studies on Syphilis in Kanto District. Masaru Takeuchi (Chiba Univ., Dermatology) (18 minutes)
- C. Epidemiological Studies on Syphilis in Shikoku District. Tadayoshi Arakawa (Tokushima Univ., Dermatology) (18 minutes)
- D. Consideration on Serological Test in Epidemiological Studies on Syphilis. Tomio Ogata (Tokyo Univ., Serology) (18 minutes)
- E. Epidemiological Studies on Syphilis in the Domain of Obstetrics and Gynecology. Chiaki Sawazaki (Nihon Univ., Obstetrics and Gynecology) (18 minutes)
- F. Epidemiological Studies on Syphilis in Pediatrics. Fuji Arita (Yokohama Univ., Pediatrics) (18 minutes)
- G. Epidemiology of Syphilis in General. Shumpei Yamamoto (Kyoto Univ., Dermatology) (18 minutes)

Subject 54. Hemolytic Diseases of the Newborn. (3 hours)

(place—Japanese Physicians Bldg.)

Chairman (chief) Tomio Ogata (Tokyo Univ., Serology)

Shokichi Ueno (Chief of the 11th Section)

Tadao Takatsu (Chief of the 18th Section)

- A. Relationship between Hemolytic Diseases of the Newborn and Rh and ABO Blood Type, and Follow-up Studies of Treatment for these Diseases.
1. Relationship between Hemolytic Diseases of the Newborn and Rh and ABO Blood Type. Michitaka Kaku (Kumamoto Univ., Obstetrical Gynecology) (20 minutes)
 2. Hemolytic Diseases of the Newborn. Motoyuki Hayashi (Tokyo Univ., Obstetrical Gynecology) (20 minutes)
 3. Prognosis and Residuals of Hemolytic Diseases of the Newborn. Kazuo Baba (Tokyo Univ., Pediatrics) (20 minutes)
 4. Hemolytic Diseases of the Newborn.
 - a. Relationship between Rh and ABO Blood Type. Takehiro Ogawa (Central Hospital of Red Cross Society, Obstetrical Gynecology) (20 minutes)
 - b. Late Results of Therapy.
 5. Hemolytic Diseases of the Newborn, and their Specificity and Particularity to be found in Japan. Koichi Shirakawa (Kyushu Univ., Obstetrical Gynecology) (20 minutes)
- B. 1. Irregular Antibodies in Normal Serum of Human Beings. Shoei Izeki (Gumma Univ., Medical Jurisprudence)
2. Irregular Antibodies in Blood (Especially Immune Antibody). Shozo Murakami (Japan Red Cross Society, Institute for Research of Blood Transfusion)

Subject 60. Heart Surgery. (3 hours)

(place—Sankei Hall)

Chairman (chief) Takeo Ozawa (Osaka Univ., Surgery)

(chief) Seiji Kimoto (Tokyo Univ., Surgery)

Kentaro Shimizu (Chief of the 24th & 47th Section)

Koichi Uchiyama (Chief of the 1st Section)

- A. Adaptability of Heart Operation (Panel).
- (Chairman) Seiji Kimoto (Tokyo Univ., Surgery) (15 minutes)
- Tachio Kobayashi (Tokyo Univ., Internal Medicine) (15 minutes)
- Shigeru Sakakibara (Tokyo Women's College of Medicine, Surgery) (15 minutes)
- Takeo Ozawa (Osaka Univ., Surgery) (15 minutes)
- B. Open Intracardiac Surgery under Direct Vision. (Chairman) Takeo Ozawa (Osaka Univ., Surgery)
- Seiji Kimoto (Tokyo Univ., Surgery) (15 minutes)

Takeo Ozawa (Osaka Univ., Surgery)
(15 minutes)

- C. Invited lecture:
The Use of the Pump Oxygenator for Surgical Treatment of Cardiovascular Lesions; Experience with more than 500 cases. D. A. Cooley (Baylor Univ., U.S.A.) (30 minutes)
- D. Dangers in Heart Surgery. Shigeru Sakakibara (Tokyo Women's College of Medicine, Surgery) (15 minutes)

Subject 63. Nephritis and Nephrosis. (3 hours) (place—Kyoritsu Hall)
Chairman (chief) Kenzo Oshima (Nihon Univ., Internal Medicine)
Yoshio Mikamo (Chief of the 43rd Section)
Tokuji Ichikawa (Chief of the 30th Section)

- A. Nephritis.
1. Structure and Function of the Kidney. Yasutami Kinoshita (Niigata Univ., Internal Medicine) (20 minutes)
 2. Pathology of Nephritis. Gompachi Yajima (Tokyo Medical and Dental College, Pathology) (20 minutes)
 3. Experimental Glomerulonephritis. Seiichi Shibata (Tokyo Univ., Internal Medicine) (20 minutes)
 4. Acute Renal Insufficiency. Hisao Takayasu (Niigata Univ., Urinology) (20 minutes)
 5. Paedonephritis. Katsumi Murakami (Nihon College of Medicine, Pediatrics) (20 minutes)
- B. Re-appraisal of Nephrosis (Panel). Rempei Sasa (Kyoundo Hospital) (10 minutes)
- Kenzo Oshima (Nihon Univ., Internal Medicine) (10 minutes)
- Seiichi Asano (Keio Univ., Internal Medicine) (10 minutes)
- Katsumi Murakami (Nihon College of Medicine, Pediatrics) (10 minutes)
- Yawara Yoshitoshi, Tokyo Univ., Internal Medicine) (10 minutes)
- Yasushi Ueda (Jikei-kai College of Medicine, Internal Medicine) (10 minutes)
- C. Invited lecture:
Relation of nephrotic syndrome to intercapillary glomerulosclerosis in diabetes. F. Kimmelstiel (Milwalkie State Hospital, U.S.A.) (30 minutes)

Subject 67. Diseases of Bile Duct, Cholelithiasis, Pancreatitis. (3 hours)
(place—Kudan Kaikan Hall)
Chairman (chief) Hiroshi Miyake (Kyushu Univ., Surgery)
Kikuo Otsuki (Chief of the 34th Section)
Nobejiro Takizawa (Chief of the 6th Section)

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| A. Chemotherapy for Bile Duct Infections. | Keimei Mashimo (Tokyo Univ., Internal Medicine) | (30 minutes) |
| B. 1. Characteristics of Cholelithiasis of the Japanese. | Tetsuo Maki (Hirosaki Univ., Surgery) | (30 minutes) |
| 2. Study on Cholelithiasis. | Saburo Matsukura (Nihon College of Medicine, Surgery) | (30 minutes) |
| 3. Cholelithiasis. | Hiroshi Miyake (Kyushu Univ., Surgery) | (30 minutes) |
| C. Pancreatitis. | Shingo Aoyama (Nagoya Univ., Internal Medicine) | (30 minutes) |

Subject 72. Problems in Muscular Physiology. (3 hours) (place—Nihon Univ., College of Dentistry, Auditorium)

Chairman (chief) Takehiko Totsuka (Nihon College of Medicine, Physiology)

Hideo Yamamura (Chief of the 45th Section)

Reiji Natori (Chief of the 39th Section)

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| A. Physiology of Muscular Contraction. | Hidenobu Majima (Juntendo College of Medicine, Physiology) |
| B. Biochemistry of Muscular Contraction. | Torao Nagai (Sapporo College of Medicine, Physiology) |
| C. Metabolism of Muscular Contraction. | Takamitsu Sekine (Juntendo College of Medicine, Biochemistry) |
| D. Relaxant of Muscle. | Hideo Yamamura (Tokyo Univ.,) |

Subject 81. Demyelinated Diseases. (3 hours) (place—Chiyoda District Hall)

Chairman (chief) Shigeo Okinaka (Tokyo Univ., Internal Medicine)

Akira Hagiwara (Chief of the 27th Section)

Taiei Miura (Chief of the 23rd Section)

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| A. World Distribution and Japanese Present Condition of Multiple Sclerosis. | Yoshigoro Kuroiwa (Kyushu Univ., Internal Medicine) | (20 minutes) |
| B. Biochemistry of Demyelination. | Itsuro Sofue (Nagoya Univ., Internal Medicine) | (20 minutes) |
| C. Pathology of Demyelinated Encephalomyelitis. | Hirotsugu Shiraki (Tokyo Univ., Internal for Research of Orebral Nerves) | (20 minutes) |
| D. Ophthalmologic Side of Demyelinated Diseases. | Jisaburo Kuwajima (Tohoku Univ., Ophthalmology) | (20 minutes) |
| E. Clinic of Demyelinated Diseases. | Tadao Tsubaki (Tokyo Univ., Institute for Research of Cerebral Nerves) | (20 minutes) |
| F. Invited lecture:
Multiple sclerosis, An unsolved problem in medicine. | H. H. Reese (Wisconsin Univ., U.S.A.) | |

Subject 86. Plastic Surgery. (3 hours) (place—Sankei International Hall)
 Chairman (chief) Seiichi Omori (Police Hospital, Dermatology)
 (chief) Tamikazu Amaji (Kyushu Univ., Plastic Surgery)
 Iyuji Miki (Chief of Preliminary Commission)
 Ryosuke Katayama (Chief of the 25th Section)

- A. Medical Cosmetics—Cosmetic Surgery.** (Chairman) Seiichi Omori (Police Hospital, Dermatology)
1. False Cheloid. Seiichi Omori (Police Hospital, Dermatology) (15 minutes)
 2. Plastic Surgery of Metamorphosis of Auricle Ears, especially of Congenital Microtia. Hideo Ishii (Gumma Univ., Otorhinology) (10 minutes)
 - Plastic Operation of External Nasal Deformity after the Operation of Hare-Lip. Ryo Takahashi (Jikei-kai College of Medicine, Otorhinology) (10 minutes)
 3. Supplement Materials. Taichiro Akiyama (Nihon College of Dentistry) (15 minutes)
 4. Plastic Operation of Uranisochasma for object of Phonetic Recovery. Speech. Iwao Nagai (Osaka Univ., Dentistry) (15 minutes)
 Seiki Morimoto (Niigata Univ., Otorhinology) (5 minutes)
 5. Invited lecture:
 The scope of Plastic Surgery. A. J. Barsky (New York Mt. Cinai Hospital, U.S.A.) (20 minutes)
- B. Plastic Surgery of the Hand.** (Chairman) Tamikazu Amako (Kyushu Univ., Plastic Surgery)
1. Recovery of Dysfunctions caused by Lesions. Tatsuya Tajima (Niigata Univ., Plastic Surgery) (20 minutes)
 2. Therapy of Scald. Takebumi Morotomi (Hirosaki Univ., Plastic Surgery) (20 minutes)
 3. Therapy of Dysfunctions caused by Leprosy. Kameo Ikeda (Keio Univ., Plastic Surgery) (20 minutes)
 4. Invited lecture:
 Tendon Transfers in the Hand. J.H. Boyes (South California Univ., U.S.A.)

April 2; (Thurs.) Afternoon.

- Subject 3. Recent Advances in Tissue Culture. (3 hours)** (place—Tokyo Univ., School of Medicine, Auditorium)
 (Chairman) Ren Kimura (Nagoya City Univ., President)
 Tomizo Yoshida (Chief of the 7th Section)
 Masaji Arai (Chief of the 2nd Section)
- A. Development of Tissue Culture and its World Tendency.** Ren Kimura (Nagoya City Univ., President) (30 minutes)
 - B. Technique and Application of Tissue Culture (Cinema).** Hajime Katsuta (Institute for Research of Infectious Diseases, Tissue Culture) (30 minutes)

C. Study on Application of Tissue Culture (Symposium).

1. Substances to Promote Growth of Cells in Tissue Culture. Hajime Katsuta (Institute for Research of Infectious Diseases, Pathology) (10 minutes)
2. Study on Mechanism of Movement of Epithelial Cells by Tissue Culture. Michio Nijima (Tokyo Medical and Dental College, Anatomy) (10 minutes)
3. Tissue Culture Applied in Embryological Genetics. Masakatsu Horikawa (Osaka Univ., Genetics) (10 minutes)
4. Variation of Cancer Cells in Tissue Culture. Masaatsu Yamada (Institute for Research of Infectious Diseases, Pathology) (10 minutes)
5. Study on Variation of Poliovirus by way of Tissue Culture. Nobuyuki Takemori (Institute for Research of Infectious Diseases) (10 minutes)

Subject 11. Problems of Anomalies of Development and Formation. (3 hours)

(place—Choson Kaikan)

Chairman (chief) Seizo Katsunuma (Nagoya Univ., President)
Kunio Fukuda (Chief of the 13th Section)
Kiyoshi Saito (Chief of the 42nd Section)

- A. Substance Controlling Histodifferentiation. Tsuneo Yamada (Nagoya Univ., Science) (20 minutes)
- B. Experimental Study on Pathogenesis of Anencephaly. Seizo Katsunuma (Nagoya Univ., President) (30 minutes)
Ujihiro Murakami (Nagoya Univ., Institute of Environmental Medicine) (30 minutes)
- C. Developmental Mechanism of Abnormal Formation of Central Nervous System, especially its Relation with Encephalome. Chisato Araki (Kyoto Univ., Surgery) (20 minutes)
- D. Malforming Efforts upon Chick-Embryo due to Toxic Chemical Substances for Cell Division. Hideo Nishimura (Kyoto Univ., Anatomy) (20 minutes)
- E. Malformation and Internal Secretion. Ichiro Hayashi (Nagasaki Univ., Pathology) (20 minutes)

Subject 14. Metabolism (2) Nucleic Acids. (3 hours) (place—Tokyo Univ., School of Law, No. 25 Room.)

Chairman (chief) Ken Makino (Jikei-kai College of Medicine, Biochemistry)

Yorio Shimazono (Chief of the 4th Section)
Katsuo Akagi (Chief of the 10th Section)

- A. Chemistry of Nucleic Acids. Ken Makino (Jikei-kai College of Medicine, Biochemistry) (30 minutes)
- B. Biosynthesis of Nucleic Acids. Kohei Takagi (Osaka Univ., Biochemistry) (30 minutes)

- C. Nucleic Acids and Protein Synthesis. Kikuo Ogata (Niigata Univ., Biochemistry) (30 minutes)
- D. Nucleic Acids and Function of Cells. Atsuhiro Shibatani (Yamaguchi College of Medicine, Bacteriochemistry) (30 minutes)

Subject 20. Internal Secretion (3) Disturbances in Hormone Secretions and their Treatment. (3 hours) (place—Sabo Kaikan)

Chairman (chief) T. Miyake (Kyoto Univ., Internal Medicine)
T. Nakao (Chief of the 16th Section)
Kintaro Yanagi (Chief of the 14th Section)

- A. 1. Parts of Pituitary Chromaffin System in Various Diseases of Pituitary Adrenal Hormone. Shohei Yoshiue (Tokyo Univ., Internal Medicine) (30 minutes)
2. Experimental Study on Disturbances in Adrenal Hormone Secretions and their Therapy. Katsuhiko Shibata (Gumma Univ., Pharmacology) (30 minutes)
3. Diagnosis of Pituitary Adrenal Diseases. Mitsuo Nishikawa (Niigata Univ., Internal Medicine) (30 minutes)
4. Therapy of Pituitary Adrenal Diseases. Gi Miyake (Kyoto Univ., Internal Medicine) (30 minutes)
- B. Invited lecture:
Clinical and Experimental Studies in Cushing's Syndrome. L. J. Soffer (New York State Univ., U.S.A.) (45 minutes)

Subject 23. Infection and Inflammation (2) Inflammation. (3 hours)

(place—Tokyo Univ., School of Science, No. 2 Bldg.)

Chairman (chief) Kaneyoshi Akazaki (Tohoku Univ., Pathology)
Nobejiro Takizawa (Chief of the 6th Section)
Tomoichiro Akiba (Chief of the 9th Section)

- A. Study on Development of Ultra-microscopic Pathology in Inflammation. Shigeyasu Amano (Kyoto Univ., Institute for Research of Virus) (25 minutes)
- B. Bacteriolytic Substances in Leukocytes. Tsunehisa Amano (Osaka Univ., Bacteriology) (25 minutes)
- C. Modification of Reparatory Process in Inflammation. Zen Watanabe (Hiroshima Univ., Pathology) (20 minutes)
- D. Cellular Reaction of Reticulo-endothelium System in Inflammation. Kaneyoshi Akazaki (Tohoku Univ., Pathology) (25 minutes)
- E. Phagocytosis in Intraperitoneal Infection in Mouse. Yoshio Sawai (Institute for Research of Infectious Diseases) (20 minutes)
- F. Studies on Inflammation by means of Aseptic Laboratory Animals. Masazumi Miyagawa (Nagoya Univ., Pathology) (35 minutes)

Subject 32. Poliomyelitis, Rabies and other Viral Infection. (3 hours)

(place—Shigaku Kaikan)

Chairman (chief) Saburo Nagaki (Chief of Ebara Hospital)

Yasuichi Nagano (Chief of the 44th Section)

Yoshio Mikamo (Chief of the 43rd Section)

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| A. Epidemic Sclero-Conjunctivitis (Infection of Adenovirus Type 8), especially the Diseases of Infantile Type. | Yukihiko Mitsui (Tokushima Univ., Ophthalmology) | (30 minutes) |
| B. Recent Rise and Fall of Vogue of Rabies. | Sugito Otani (Institute for Research of Infectious Diseases) | (30 minutes) |
| C. Real Problems of Poliomyelitis in Japan. | | |
| 1. Epidemiology and Prophylaxis. | Masami Kitaoka (Institute for Research of Preventive Hygiene) | (30 minutes) |
| 2. Therapy of Poliomyelitis, especially Iron Lung. | Hideji Asano (Tokyo Univ., First Hospital) | (30 minutes) |
| 3. The Post-Poliomyelitic Residuals and their Social Facilities. | Fumihide Koike (Sanatorium of Neoplasty of Limbs) | (30 minutes) |

Subject 40. Tumors (3) Early Diagnosis of Cancer. (Panel Discussion) (3 hours)

(place—Yomiuri Hall)

Chairman (chief) Kentaro Shimizu (Tokyo Univ., Surgery)

Masaomi Ishikawa (Chief of the 26th Section)

Kensuke Tsukamoto (Chief of the 32nd Section)

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| A. Precancerosis. | Masaru Hisatome (Osaka Univ., Surgery) | |
| B. Early Diagnosis of Cancers. | | |
| 1. Side from Internal Medicine (including Diagnostic Reaction). | Toshio Kurokawa (Tohoku Univ., President) | |
| 2. Surgical Side. | Tamotsu Fukuda (Juntendo College of Medicine, Surgery) | |
| 3. Study of Early Diagnosis of Cancer in Cervix of Uterus. | Kazumasa Masubuchi (Institute for Research of Cancers) | |
| 4. Early Diagnosis of Bone Tumors. | Iyuji Miki (Tokyo Univ., Plastic Surgery) | |
| 5. Dermatological Side: Early Diagnosis of Skin Cancer. | Tokuji Fujinami (Osaka Univ., Dermatology) | |
| 6. Early Diagnosis of Larynx Cancer. | Hikonojo Iwamoto (Kurume Univ., Otorhinology) | |
| C. Invited lecture: | | |
| A Critical Examination of the Concepts "Pre-cancerous" and "Carcinoma in situ". | S. P. Reiman (Philadelphia Institute for Research of Cancers, U.S.A.) | |

Subject 50. Syphilis (2) Drug Resistant Syphilis. (3 hours) (place—Tokyo Univ., College of Law, No. 31 Room)

- Chairman (chief) Shumpei Yamamoto (Kyoto Univ., Dermatology)
 Kanehiko Kitamura (Chief of the 29th Section)
 Etsuzo Komiya (Chief of the 17th Section)
 Rinzo Shinoda (Chief of Tokyo Central Hospital of Mariners' Insurance)
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| A. Experimental Study on Drug Resistant Syphilis. | Kentaro Higuchi (Kyushu Univ., Dermatology) (20 minutes) |
| B. Serological Examination of Drug Resistant Syphilis. | Keizo Nakamura (Chief of Institute for Research of Preventive Hygiene) (18 minutes) |
| C. Studies on Drug Resistant Syphilis. | Kikuo Obara (Hygiene Bureau of Tokyo Metropolis) (18 minutes) |
| D. Cardio-vascular System and Neurolues. | Hideo Ueda (Tokyo Univ., Internal Medicine) (18 minutes) |
| E. Therapy of Congenital Syphilis. | Fuji Arita (Yokohama Univ., Pediatrics) (18 minutes) |
| F. Application of P ³² in Therapy of Drug Resistant Syphilis. | Osamu Miura (Nihon Univ., Dermatology) (18 minutes) |
| G. Results of Therapy of Drug Resistant Syphilis. | Rinzo Shinoda (Chief of Tokyo Central Hospital of Mariners' Insurance) (18 minutes) |

Subject 56. Circulation (1) Electrocardiogram and Cardiac Circulation. (3 hours)

(place—Chiyoda District Hall)

- Chairman (chief) Magojiro Maekawa (Kyoto Univ., Internal Medicine)
 Shigeo Okinaka (Tokyo Univ., Internal Medicine)
 Koichi Uchiyama (Chief of the 1st Section)
 Jiro Ishida (Chief of the 20th Section)
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| A. Electrocardiogram. | (Chairman) Magojiro Maekawa (Kyoto Univ., Internal Medicine) |
| Membrane Potential of Heart Muscule. | Kojiro Matsuda (Tokyo Univ., Physiology) (15 minutes) |
| Background of Membrane Potential. | Magojiro Maekawa (Kyoto Univ., Internal Medicine) (15 minutes) |
| Electrocardiogram of Myocardial Disturbances. | Eiichi Kimura (Tohoku Univ., Internal Medicine) (15 minutes) |
| | Noboru Kimura (Kyushu Univ., Internal Medicine) (15 minutes) |
| B. Coronal Circulation, especially A few Problems of Pathophysiology of Coronal Circulation. | (Chairman) Shigeo Okinaka (Tokyo Univ., Internal Medicine) |
| Operating Mechanism of Sympathomimetic Substances to Control Circulation. | Tachio Kobayashi (Tokyo Univ., Internal Medicine) (15 minutes) |

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| Functional Coronal Insufficiency. | Toraroku Hashimoto (Tokyo Univ., Pharmacology) | (15 minutes) |
| Origin of Coronal Diseases. | Masaji Hayase (Kyoto Univ., Internal Medicine) | (15 minutes) |
| Neurohumoral Control of Coronal Circulation. | Mototaka Murakami (Kanazawa Univ., Internal Medicine) | (15 minutes) |
| | Masao Ikeda (Tokyo Univ., Internal Medicine) | (15 minutes) |
| Morphological Manifestation of Disturbances of Coronal Circulation in Myocardia. | Masaichi Otsu (Tokyo Univ., Branch Hospital) | (15 minutes) |
| Subject 59. Blood Vessels. (3 hours) | | |
| | (place—Sankei Hall) | |
| | Chairman (chief) Seiji Kimoto (Tokyo Univ., Surgery) | |
| | Kikuo Otsuki (Chief of the 34th Section) | |
| | Kunio Kawaishi (Chief of the 48th Section) | |
| A. Physiology of Peripheral Circulation. | Kazuyoshi Nishimaru (Hiroshima Univ., Physiology) | (20 minutes) |
| Concept of Peripheral Circulation. | | |
| Review of Reactions of Peripheral Vessels. | Kiyoshi Seki (Tokyo Univ., Internal Medicine) | (20 minutes) |
| B. Occulsive Diseases of Blood Vessels. | | |
| Occulsive Arterial Disorders of Extremities, Pathologic Physiology. | Yoshio Hashimoto (Nagoya Univ., Surgery) | (15 minutes) |
| Occulsive Diseases of Venae, especially their Morbid Physiology. | Koichi Ishikawa (Tokyo Univ., Surgery) | (15 minutes) |
| Diagnosis and Therapy of Occulsive Diseases of Peripheral Arteries of Limbs. | Shigeru Hatano (Tokyo Univ., Surgery) | (15 minutes) |
| Occulsive Diseases of the Carotid. | Keiji Sano (Tokyo Univ., Surgery) | (15 minutes) |
| C. Surgical Treatment of Aortic Aneurysms. | Seiji Kimoto (Tokyo Univ., Surgery) | (20 minutes) |
| D. Invited lecture: | | |
| Experience with Surgical Treatment of Aneurysms and Occulsive Diseases of the Aorta and Great Vessels. | D. A. Cooley (Bayler Univ., U.S.A.) | |

Subject 68. Clinical Aspects of Enteric Diseases. (3 hours)

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| | (place—Kudan Kaikan Hall) | |
| | Chairman (chief) Shinichi Kawashima (Kawashima Clinic) | |
| | Tsuneaki Nakayama (Chief of the 46th Section) | |
| | Tadao Takatsu (Chief of the 18th Section) | |
| A. Digestion and Absorption in Intestines. | Toichiro Sawada (Kyushu Univ., Internal Medicine) | (50 minutes) |
| Speech. | Tsuneaki Nakayama (Chiba Univ., Surgery) | (12 minutes) |
| Speech. | Masanobu Tomoda (Kyushu Univ., Surgery) | (12 minutes) |

- B. Constipation and Peritoneal Adhesion.
1. Habitual Costive Diseases and their Surgical Treatment. Goro Imai (Yokohama Univ., Surgery) (20 minutes)
Chronic Costive Diseases. Takeo Hayashida (Tokyo Univ., Surgery) (15 minutes)
 2. Study of Adhesion of Enteric Vessels. Yoshi Takada (Jikei-kai College of Medicine, Surgery) (15 minutes)
Shuhei Takita (Tokushima Univ., Surgery) (25 minutes and cinema 25 minutes)
- C Invited lecture:
- Primary and Secondary Malabsorption; A Comparision of Absorption Jests. H. M. Pollard (Michigan Univ., U.S.A.) (25 minutes)

Subject 73. Electromyogram. (3 hours) (place—Nihon Univ., School of Dentistry, Auditorium)

Chairman (chief) Dennosuke Jinnai (Okayama Univ., Surgery)
Takehiko Totsuka (Chief of the 3rd Section)
Reiji Natori (Chief of the 39th Section)
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- A. Fundamental of Electromyogram. Hiroshi Shimazu (Tokyo Univ., Institute for Research of Neurology) (25 minutes)
- B. Diagnosis by Electromyogram and its Limitation. Tadao Tsubaki (Tokyo Univ., Institute for Research of Neurology) (25 minutes)
- C. Clinical Dynamics by Electromyogram. Naoichi Tsuyama (Tokyo Univ., Plastic Surgery) (25 minutes)
- D. Functional Differentiation of Skeletal Muscles. Dennosuke Jinnai (Okayama Univ., Surgery) (15 minutes)
- E. Electromyogram and γ -System (rigidity, spasticity, clonus). Mitsuo Numamoto (Okayama Univ., Surgery) (15 minutes)
- F. Fundamental of Provocative Electromyogram and its Application. Saburo Homma (Chiba Univ., Physiology) (30 minutes)
- G. General Discussion; Topic undecided. (20 minutes)

Subject 74. Bone Fractures. (3 hours) (place—Sankei International Hall)

Chairman (chief) Ryosuke Katayama (Jikei-kai College of Medicine, Plastic Surgery)

Tsuneo Kono (Chief of the 31st Section)

Yoshio Oshima (Chief of the 15th Section)

- A. Chemistry of Recovery of Bone Fractures. Motoo Harada (Wakayama Univ., Plastic Surgery) (20 minutes)
- B. Pathology of Bone Fractures. Yoshiyuki Yoshimura (Yokohama City Univ., Pathology) (20 minutes)

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| C. Relation between Fracture and Longitudinal growth of Bone. | Torai Iwahara (Keio Univ., Plastic Surgery) | (20 minutes) |
| D. Therapy of Bone Fractures. | Saburo Iino (Tohoku Univ., Plastic Surgery) | (20 minutes) |
| E. Social Prognosis of the Bone Fractures. | Tokumasa Shiotsu (Tamatsukuri Welfare Pension Hospital) | |
| F. Invited lecture:
Intramedullary Nailing. | Küntscher (Hamburg Harbor Hospital, Germany) | (30 minutes) |

Subject 75. Foreign Bodies in Respiratory Tract and Oesophagus. (1.5 hours)

(place—Kyoritsu Hall)

Chairman (chief) Toshizo Ofuji (Nihon College of Medicine, Otorhinology)

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| A. Diagnosis and Prognosis. | Yutaka Tatsuki (Tohoku Univ., Otorhinology) | |
| B. Therapeutical Side. | Kyoshiro Yamakawa (Prof. Emeritus of Osaka Univ.) | |
| C. Cases. | Jo Ono (Keio Univ., Otorhinology) | |
| D. Speech on Foreign Bodies in Respiratory Tract and Oesophagus. | Kaoru Yamamoto (Osaka City Univ., Otorhinology) | |

Subject 76. Phonating, Mechanism and Voice. (1.5 hours) (place—Kyoritsu Hall)

Chairman (chief) Ichiro Kirikae (Tokyo Univ., Otorhinology; Chief of the 28th Section)

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| A. Anatomical Side. | Koichiro Oishi (Tokyo Univ., Branch Hospital, Otorhinology) | (20 minutes) |
| B. Electromyographical Side. | Fumio Nakamura (Kyoto Prefectural Univ., Otorhinology) | (20 minutes) |
| C. Acoustical Side—chiefly Sonagram. | Koji Goto (Kyoto Univ., Otorhinology) | (20 minutes) |
| D. Voice of the Japanese. | Kotoji Satta (College of Arts and Music) | (20 minutes) |
| Additional Speech. | Yoshio Hayashi (Toyo Hospital) | |

Subject 87. Recent Problems in Anesthesiology. (3 hours)

(place—Japanese Physicians' Bldg.)

Chairman (chief) Kanyu Muto (Tohoku Univ., Surgery)
Hideo Yamamura (Chief of the 45th Section)
Hiroshi Kumagaya (Chief of the 5th Section)

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| A. Present Condition of Anesthesiology and Pre-, In.—and Postoperative management. | Hideo Yamamura (Tokyo Univ., Anesthesiology) | (45 minutes) |
| B. Infantile Anesthesia (Panel). | | |
| 1. Infantile Anesthesia from Side of Oral Surgery. | Mototaka Sasaki (Kyushu Univ., Oral Surgery) | (20 minutes) |
| 2. From Side of Surgery of the Newborn. | Mitsuko Nakamura (Juntendo College of Medicine, Anesthesiology) | (20 minutes) |

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| 3. From Side of General Surgery. | Toshihide Yonezawa (Iwate Univ., Anesthesiology) | (20 minutes) |
| C. Painless Delivery. | Kuniomi Osauchi (Keio Univ., Obsteric Gynecology) | (30 minutes) |
| D. Profound Hypothemia. | Akira Watanabe (Tohoku Univ., Surgery) | (20 minutes) |

April 4, (Satur.) Afternoon

Subject 16. Metabolism (4) Electrolytes. (3 hours) (place—Tokyo Univ., College of Medicine, Section of Internal Medicine, Auditorium)

Chairman (chief) Sadataka Tasaka (Tokyo Univ., Internal Medicine)
Kintaro Yanagi (Chief of the 14th Section)
Yorio Shimazono (Chief of the 4th Section)

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| A. Electrolytes in the Domain of Internal Medicine. | Yawara Yoshitoshi (Tokyo Univ., Internal Medicine) | (40 minutes) |
| B. Study of Electrolytes. | Shotatsu Yamada (Shinshu Univ., Pediatrics) | (40 minutes) |
| C. Electrolytes in the Domain of Surgery. | Toshio Takafuji (Sagamihara Hospital Surgery) | (40 minutes) |
| D. Side of Labor Hygiene. | Hajime Saito (Institute for Research of Labor, Biochemistry) | (40 minutes) |

Subject 19. Internal Secretion (2) Central Control of Internal Secretion.

(3 hours)

(place—Sabo Kaikan)

Chairman (chief) Shimanosuke Katsuki (Kyushu Univ., Internal Medicine)

Ken Nakao (Chief of the 16th Section)

Shoji Arai (Chief of the 2nd Section)

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| A. Internal Secretion Control of Central Nervous System and Central Control of Hormone. | Toshiyuki Kurotsu (Osaka Univ., Anatomy) | (30 minutes) |
| B. Central Disturbances and Functions of Internal Secretion. | Shimanosuke Katsuki (Kyushu Univ., Internal Medicine) | (30 minutes) |
| C. Central Control of Internal Secretion—mainly Insulin Secretion. | Kinori Kosaka (Tokyo Univ., Internal Medicine) | (30 minutes) |
| D. Effects of Sexual Steroid upon the Central Nervous System. | Takashi Kobayashi (Tokyo Univ., Obsteric Gynecology) | (30 minutes) |
| E. Regulating Factors of Hypothalamus to Thyroid. | Kisuo Shibuzawa (Gumma Univ., Surgery) | (30 minutes) |

Subject 25. Fundamental Problems in Allegrgy. (3 hours) (place—Shigaku Kaikan)

Chairman (chief) Keizo Nakamura (Chief of Institute for Research of Preventive Hygiene)

Kiyoshi Saito (Chief of the 42nd Section)

Hikozaemon Hasato (Chief of the 12th Section)

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| A. Mechanism of Anaphylaxie. | Keizo Nakamura (Institute for Research of Preventive Hygiene) (20 minutes) |
| B. Mechanism of a few Allergy Phenomena besides Anaphylaxie | Tomio Ogata (Tokyo Univ., Serology) (20 minutes) |
| C. Invited lecture:
Expentelle Untersuchungen zur Frage Anaphylaktischer Reaktion undrim Nervensystem. | L. Lendle (Gettingen Univ., Germany) (30 minutes) |
| D. Histamin Release and its Pathophysiology. | Hidemasa Yamazaki (Okayama Univ., Pharmacology) (20 minutes) |
| E. Invited lecture:
Mécanisme Immunologique de la réaction anaphylactique. | B. N. Halpern (Brusait Hospital, France) (30 minutes) |
| F. Mechanism of Growth of Cutaneous Allergose. | Minoru Ito (Aomori Prefectural Central Hospital) (20 minutes) |
| G. Invited lecture:
Zur Ätiopathogenese und Therapie der Konstitutionellen Neurodermatitis. | A. Marchionini (Munben Univ., Germany) |

Subject 26. Collagen Disease. (3 hours) (place—Nihon Univ., School of Dentistry, Auditorium)

Chairman (chief) Kanehiko Kitamura (Tokyo Univ., Dermatology)

(chief) Yoshio Oshima (Tokyo Univ., Physical Therapy)

Enjiro Takizawa (Chief of the 6th Section)

Ro Hagiwara (Chief of the 27th Section)

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| A. Concept and Pathology of Collagen Diseases | (Chairman) Kanehiko Kitamura (Tokyo Univ., Dermatology) |
| | Yuichi Otaka (Tokyo College of Medicine, Pathology) (10 minutes) |
| Relationship of Histological Features to Serum Protein Ones—Aspects of Collagen Diseases in Experimental Delayed Hypersensitisation—Polyphenomena of Collagen Diseases from Pathoanatomical Materials. | Atsushi Okabayashi (Chiba Univ., Pathology) (10 minutes) |
| | Yasuo Tokoro (Tokyo Univ., Pathology) (10 minutes) |
| B. Clinic of Collagen Diseases (Lupus Erythematodes, Rheumatism, Periarteritis Nodosa and others). | (Chairman) Kanehiko Kitamura (Tokyo Univ., Dermatology) |
| | (Chairman) Yoshio Oshima (Tokyo Univ., Physical Therapy) |
| 1. Undecided. | Masaru Takeuchi (Chiba Univ., Dermatology) (10 minutes) |

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| 2. Study on Phenylalanine and Tyrosine Intermediate Metabolism in Collagen Disease. | Choo Nishimura (Wakayama Univ., Dermatology) (10 minutes) |
| 3. Clinic of Collagen Disease, especially its Hormone Therapy. | Mitsuo Nishikawa (Niigata Univ., Internal Medicine) (10 minutes) |
| 4. Clinical Significance of LE Phenomenon. | Masabumi Komiya (Tokyo Univ., Internal Medicine) (10 minutes) |
| 5. Therapy of Rheumatoid Arthritis—especially reexamination of its Steroid Hormone Maintenance Quantity. | Toshio Kodama (Okayama Univ., Plastic Surgery) (10 minutes) |
| 6. Serological Reaction of Collagen Disease centering about Rheumatoid Arthritis. | Yasuo Kawakami (Tokyo Univ., Physical Therapy) (10 minutes) |
| C. Behcet's Syndrome. | Ro Hagihara (Tokyo Univ., Ophthalmology) (30 minutes) |
| D. Invited lecture:
An Approach to the pathogenesis & treatment of rheumatoid arthritis. | R. P. Gonzalez (President of Medical Association, Philippines) (30 minutes) |
| E. Invited lecture:
Experimental and Histologic Studies on the Nature and Significance of Aschoff Bodies in Rheumatic Heart Disease. | G. E. Murphy (Cornel Univ.,) (30 minutes) |

Subject 28. Some Problems in Pharmacotherapy (2) Side Reactions in Chemotherapy.

(3 hours)

(place—Tokyo Univ., School of Medicine, Main Bldg., Auditorium)

Chairman (chief) Hiroshi Kumagai (Tokyo Univ., Pharmacology)
Saburo Nagaki (Chief of the 19th Section)
Ichiro Kirigae (Chief of the 28th Section)

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| A. Penicillin Shock. | A lecture selected from members of the Section. |
| B. Streptomycin Dysacusis. | Fumio Nakamura (Kyoto Prefectural Univ., Otorhinology) (30 minutes) |
| Disturbances in Acouphones by Streptomycin. | Juichi Sato (Jikei-kai College of Medicine, Otorhinology) (10 minutes) |
| Speech. | Takahashi Tatsuki (Hirosaki Univ., Otorhinology) (10 minutes) |
| C. Alternate Phenomenon of Bacteria and Alternate Disease of Bacteria. | Shunji Ishiyama (Kanto Communication Hospital, Surgery) (30 minutes) |
| D. Invited lecture:
Untoward Reactions to Antibiotics. | M. H. Seevers (Michigan Univ., U.S.A.) (30 minutes) |
| Medical advances since the time of Nagayoshi Nagai. | K. K. Chen (U.S.A.) |

Subject 35. Parasitic Infections (1) Ankylostomiasis and Ascariasis. (3 hour)(place—Tokyo Univ., School of Medicine,
No. 1 Bldg., 3rd Floored Auditorium)Chairman (chief) Yoshitaka Komiya (Institute for Research of
Preventive Hygiene, Parasitology)

(chief) Kaoru Morishita (Osaka Univ., Microbiology)

Katsuo Akagi (Chief of the 10th Section)

Shojiro Asahina (Chief of the 37th Section)

- A. Ankylostomiasis. (Chairman) Yoshitaka Komiya (Institute
for Research of Preventive Hygiene,
Parasitology) (5 minutes)
1. Ankylostomiasis and Blood Patho- Tomiichi Masuya (Kyushu Univ., Internal
genesis of Anemia. Medicine) (16 minutes)
 2. Clinic of Carriers of Tatsu Ishizaki (Institute for Research of
Ankylostomiasis. Preventive Hygiene) (16 minutes)
 3. Clinic of Wakana Disease and its Kuni Ishihara (Tottori Univ., Internal Me-
Pathogenesis. dicine) (16 minutes)
 4. Therapy of Ankylostomiasis. Shigeo Iwata (Osaka College of Medicine,
Internal Medicine) (16 minutes)
- B. Ascariasis. (Chairman) Kaoru Morishita (Osaka Univ.,
Institute for Research of Microbiology)
1. Migration of Ascarids and their Tetsuo Maki (Hirosaki Univ., Surgery)
Clinic. (15 minutes)
 2. Antigen and Antibody in the Tatsu Matsumura (Gumma Univ., Pedia-
Ascariatic Allergy. trics) (15 minutes)
 3. New Diagnosis of Ascariasis. Tetsuo Morishita (Gifu Univ., Parasitology)
(15 minutes)
 4. Anthelminthic, especially Problem Yoshitaka Komiya (Institute for Research
of its Resistance to the Drug. of Preventive Hygiene, Parasitology)
(15 minutes)
- C. Discussion.

Subject 43. Tumors (6) Chemotherapy of Cancer (1) Anticancer Drugs.

(3 hours)

(place—Yomiuri Hall)

Chairman (chief) Morizo Ishidate (Tokyo Univ., Pharmacology)

(chief) Tomizo Yoshida (Tokyo Univ., Pathology)

Kikuo Otsuki (Chief of the 30th Section)

Tokuji Ichikawa (Chief of the 30th Section)

- A. Anticancer Substances. (Chairman) Morizo Ishidate (Tokyo Univ.,
Pharmacology)
1. Nitrogen Mustard Derivative. Yoshio Sakurai (Institute for Research of
Pharmacology) (20 minutes)
 2. Antimetabolite and its Combined Denichi Mizuno (Institute for Research of
Treatment. Preventive Hygiene) (20 minutes)
 3. Studies on Anticancer Drugs ob- Takaaki Miyaki (Chiba Univ., Pharma-
served from Special Components of cology) (20 minutes)
Cancer.

- B. Antibiotics.
1. Investigation of Anticancer Activities of Antibiotics. Hamao Umezawa (Institute for Research of Preventive Hygiene) (25 minutes)
 2. Study on Anticancer Antibiotics. Fujiki Hata (Kitazato Institute) (20 minutes)
- C. Animal Tests. (Chairman) Tomizo Yoshida (Tokyo Univ., Pathology)
1. Animal Experiment of Anticancer Drugs. Tomizo Yoshida (Tokyo Univ., Pathology) (20 minutes)
 2. Application of Screening Method of Chemotherapeutics in the Bacteriological Domain. Tadashi Yamamoto (Institute for the Research of Infectious Disease) (20 minutes)
 3. Cytotoxic Alkylating Agents, especially Toxicity and Pharmacology of β -Chloroethylamine Compound. Iwao Yamamoto (Nara Univ., Pharmacology) (20 minutes)

Subject 45. Leukemia. (3 hours) (place—Kudan Kaikan Hall)
 (Chairman) Etsuzo Komiya (Tokyo College of Medicine, Internal Medicine)
 Yoshio Mikamo (Chief of the 43rd Section)
 Tsuneo Kono (Chief of the 31st Section)

- A. Statistical Observation of Leukemia. Etsuzo Komiya (Tokyo College of Medicine, Internal Medicine) (30 minutes)
- B. Pathology of Leukemia. Zen Watanabe (Hiroshima Univ., Pathology) (30 minutes)
- C. Clinic of Leukemia. Its Neurological Side. Yasuo Kawakita (Kumamoto Univ., Internal Medicine) (30 minutes)
 Yasuo Toyokura (Tokyo Univ., Internal Medicine) (30 minutes)
- D. Chemotherapy of Leukemia. Kiyoji Kimura (Nagoya Univ., Internal Medicine) (30 minutes)
- E. Discussions. (30 minutes)

Subject 46. Tuberculosis (1) Problems in Treatment of Tuberculosis. (3 hours)
 (place—Tokyo Univ., School of Laws, No. 25 Room)
 Chairman (chief) Imasato Donomae (Osaka Univ., Internal Medicine)
 Jiro Ishida (Chief of the 20th Section)
 Ryosuke Katayama (Chief of the 25th Section)

- A. Pharmaceutical Resistance and Toxicity of Tubercle Bacillus. Mitsuo Hori (Osaka Univ., Institute for Research of Microbiology) (15 minutes)
- B. Infantile Tuberculosis. Ichiro Sagawa (Kanazawa Univ., Pediatrics) (15 minutes)
- C. Follow-up Evaluation of Chemotherapy of Pulmonary Tuberculosis. Imasato Donomae (Osaka Univ., Internal Medicine) (15 minutes)
- D. Follow-up Evaluation of Surgical Treatment of Pulmonary Tuberculosis. Ansei Aoyagi (Kyoto Univ., Surgery) (15 minutes)
- E. Internal Treatment of Malignant Pulmonary Tuberculosis. Moichi Sunahara (Tokyo National Sanatorium) (15 minutes)

- Surgical Treatment of Malignant Pulmonary Tuberculosis, especially its Functional Limit. Chikashi Suzuki (Tohoku Univ., Institute of Research of Antibiotics) (15 minutes)
- F. Treatment of Tuberculosis of Bone and Joint. Ryosuke Katayama (Jikei-kai College of Medicine, Plastic Surgery)
- G. Invited lecture: (15 minutes)
- Surgery of the spine. D. M. Bosworth (St. Luke Hospital, New York, U.S.A.) (30 minutes)
- Der heutige Stand der Chemotherapie der Tuberculose. G. Domagk (Bayern Institute, Germany) (30 minutes)

Subject 53. Blood (3) Anemias. (3 hours) (place—Chiyoda District Hall)
 Chairman (chief) Takehiko Kikuchi (Kyoto Univ., Internal Medicine)
 Masakichi Ueno (Chief of the 11th Section)
 Tsuneaki Nakayama (Chief of the 48th Section)

- A. Aquired Hemolytic Anemias. Masaichi Fukasa (Kyoto Univ., Internal Medicine)
- B. Agranulocytosis. Akira Okubo (Kansai College of Medicine, Internal Medicine)
- C. Problems of Coombs Test. Naoshi Matsubashi (Tokyo Univ., Serology)
- D. Aplastic Anemia.
1. Anemia and Bone Marrow. Ichiro Hirafuku (Showa College of Medicine, Pathology)
2. Aplastic Anemia. Yahito Hasegawa (Keio Univ., Internal Medicine)
3. Clinic of Aplastic Anemia. Junichi Hattori (Kyushu Univ., Internal Medicine)

Subject 57. Circulation (2) Cerebral Circulation and Apoplexy. (3 hours)
 (place—Tokyo Univ., School of Laws(No. 31 Room)
 Chairman (chief) Shigeru Matsuoka (Nagasaki Univ., Pathology)
 Shigeo Okinaka (Chief of the 8th Section)
 Seiji Kimoto (Chief of the 22nd Section)

- A. Cerebral Circulation.
1. Cerebral Apoplexy and its Emergency Measures observed from Side of Cerebral Circulation. Jonosuke Atarashi (Tokyo Univ., Internal Medicine) (20 minutes)
2. Cerebral Circulation.
- B. Cerebral Apoplexy.
1. Relationship of Functional Histologic Specificity of Intracranial Vessels to Apoplexy. Shigeru Matsuoka (Nagasaki Univ., Pathology) (30 minutes)
2. Experimental Side of Apoplexy, especially Significance of Angiospasm. Masao Kase (Kwanto Communication Hospital) (20 minutes)
3. Undecided. Shigeo Okinaka (Tokyo Univ., Internal

- Medicine) (30 minutes)
 C. Regulation of Blood Pressure and Hypertension. C. Heymans (Lieques Univ., Belgium) (30 minutes)

Subject 61. Hypertention (1) Etiopathogenesis. (3 hours)

(place—Kyoritsu Hall)

Chairman (chief) Tsurayuki Sasa (Chief of Kwanto Communication Hospital)

Haruo Mikami (Chief of the 33rd Section)

Shinichi Kawashima (Chief of the 21st Section)

- A. Epidemiology of Hypertension. Tokuro Fukuda (Chiba Univ., Physiology) (20 minutes)
 B. Hypertention and Heredity. Saadnobi Miyao (Kumamoto Univ., Institute for Research of Bodily Constitution) (10 minutes)
 C. Borderline Hypertension. Tatsuo Tanishima (Asahi Insurance Co.) (25 minutes)
 D. Internal Secretary Factors of Nerves. Tatsuo Torigai (Tohoku Univ., Internal Medicine) (30 minutes)
 E. Humoral Factors. Kenzo Oshima (Nihon Univ., Internal Medicine) (30 minutes)
 F. Hypertension and ATP, ATP-ase. Magojiro Maekawa (Kyoto Univ., Internal Medicine) (30 minutes)

Subject 70. Ekiri. (3 hours)

(place—Sankei Hall)

Chairman (chief) Sensuke Izumi (Kanazawa Univ., Prof Emeritus)

Tadao Takatsu (Chief of the 18th Section)

Asaichiro Akiba (Chief of the 9th Section)

- A. Pathology of Ekiri.
 1. Ekiri and Bacterial Toxin. Shigeo Iwahara (National Laboratory of Hygiene) (20 minutes)
 2. Pathology of Ekiri. Masashi Miyake (Tokyo Univ., Pathology) (20 minutes)
 3. Pathological Anatomy of Ekiri, Speech. Toyosuke Watanabe (Komagome Hospital) (20 minutes)
 B. Pathophysiology of Ekiri. Takio Shimamoto (Tokyo Medical and Dental College, Physiology) (20 minutes)
 Munenori Enjoji (Kyushu Univ., Pediatrics) (20 minutes)
 C. Essential Feature and Therapy of Ekiri-Like Symptoms (Children Shock-Like Diseases). Tadao Takatsu (Tokyo Univ., Pediatrics)

Subject 77. Problems in Mental Hygiene (1). (3 hours)

(place—Sankei International Hall)

Chairman (chief) Tsuneo Muramatsu (Nagoya Univ., Neurology)

Taei Miura (Chief of the 23rd Section)

Kentaro Shimizu (Chief of the 24th and 47th
Section)

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| A. Introduction to Neurosis. | Tsuneo Muramatsu (Nagoya Univ., Neurology) |
| B. Children's Neurosis. | Fumio Kida (Nihon College of Medicine, Pediatrics) (22 minutes) |
| C. Somatopathy and Neurosis. | Torijiro Ikemi (Kyushu Univ., Internal Medicine) (22 minutes) |
| D. Pharmaceutical Treatment of Neurosis. | Tsunao Sakurai (Kyushu Univ., Neurology) (22 minutes)
Kazuyoshi Ikeda (Kyushu Univ., Neurology) (22 minutes) |
| E. Relation between Mind and Cerebral Function—Mental and Physical Medico-Study of Therapeutical Process of Neurosis. | Akira Kasamatsu (Tokyo Univ., Neurology) (22 minutes) |
| F. Physioneurosis of Religious Meditation viewed Electro-encephalographically and Internal Secretary Function of Automatic Nerve System. | Nozomu Suwa (Hokkaido Univ., Neurology) (22 minutes) |
| G. Questions and Discussions. | |

Subject 85. Radiotherapy and its Limitation. (3 hours) (place—Tokyo Univ., School of Science, No. 2 Bldg.)

Chairman (chief) Masanori Nakaizumi (ABCC)

Kensuke Tsukamoto (Chief of the 32nd Section)

Masaomi Ishikawa (Chief of the 26th Section)

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| A. Points in Radiotherapy. | Masanori Nakaizumi (ABCC) (20 minutes) |
| B. Distribution in the Space of Ray Volume of Radiotherapy. | Tadashi Miyagawa (Tokyo Univ., Radioactivity) (20 minutes) |
| C. Difference of Ray Qualities and Therapeutical Effects. | Hideo Irie (Kyushu Univ., Radioactivity) (20 minutes) |
| D. Time Factors of Radioactive Rays and Change of the Treatment Methods. | Toshimitsu Takeda (Okayama Univ., Radioactivity) (20 minutes) |
| E. Reaction of Malignant Tumorous Tissues to Radioactive Rays. | Kunio Ota (Tokyo Medical and Dental College, Pathology) (20 minutes) |
| F. Tissue Forms, Genetic Environments of Cancers and Therapeutical Effects of Radioactive Rays. | Kensuke Tsukamoto (Institute for Research of Cancers) (20 minutes) |
| G. Treatment of Cancers by Isotope. | Hisao Yamashita (Keio Univ., Radioactivity) (20 minutes) |

- H. Local and General Disorders at the Hiroshi Kaneda (Kyoto Prefectural Univ.,
Time of Radiotherapy. Radioactivity) (20 minutes)

April 4, (Satur.) Afternoon

Subject 15. Metabolism (3) Vitamin. (3 hours) (place—Tokyo Univ., School of
Medicine, Section of Internal
Medicine, Auditorium)

Chairman (chief) Akiharu Fujita (Kitazato Institute, Biochemistry)
Yorio Shimazono (Chief of the 4th Section)
H. Hagiwara (Chief of the 27th Section)

- A. Cocarboxirase and Vitamin B₁. Yorio Shimazono (Tokyo Univ., Biochemis-
ty) (30 minutes)
- B. Vitamin and Intestinal Flora. Akiharu Fujita (Kitazato Institute Bio-
chemistry) (30 minutes)
- C. Vitamin and Infantile Diseases. Tsuneo Nakamura (Kyoto Prefectural
Univ., Pediatrics) (30 minutes)
- D. Significance of Vitamin B₁ and Pitui- Ryoji Asayama (Kyoto Univ., Ophthal-
tary Hormone. mology) (30 minutes)
- E. Discussion.

**Subject 21. Internal Secretion (4) Disturbances in Hormone Secretions and their
Treatment (2). (3 hours)** (place—Sabo Kaikan)

Chairman (chief) Ryoshu Koyama (Tokyo Women's Medical College,
Pharmacology)

(chief) Kojiro Shichijo (Gumma Univ., Internal Medicine)
Ken Nakao (Chief of the 16th Section)
Tokuji Ichikawa (Chief of the 30th Section)

- A. Sexual Hormone. (Chairman) Ryoshu Koyama (Tokyo Wom-
en's Medical College, Pharmacology)
1. Abortive, Premature Birth and Hor- Kyushiro Fujii (Tokyo Medical and Dental
mone Treatment of Lactigenous In- College, Osteric Gynecology)
sufficiency. (20 minutes)
2. Hormone Treatment of Abnormaly Seiichi Matsumoto (Gumma Univ., Obsteri-
of Menstrual Cycle. cal Gynecology) (20 minutes)
3. Abnormaly of the System of Male Kyoichiro Ochiai (Tokyo Univ., Urology)
Sexual Organs and its Hormone Treatment. (20 minutes)
4. Sexual Hormone in Animals. Yoshihiko Koyama (Tokyo Women's Medi-
cal College, Pharmacology)
(15 minutes)
- B. Thyroid Hormone. (Chairman) Kojiro Shichijo (Gumma Univ.,
Internal Medicine)
1. Disturbances in Thyroid Hormone. Kojiro Shichijyo (Gumma Univ., Internal
Medicine) (17 minutes)

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| 2. Application and Limitation of Anti-thyrotherapeutics for Hyperthyroidism. | Kazuo Shizume (Tokyo Univ., Internal Medicine) | (17 minutes) |
| 3. Radioactive Iodine Treatment of Hyperthyroidism. | Hisao Yamashita (Keio Univ., Radioactivity) | (17 minutes) |
| 4. Present Condition of Surgery of Hyperthyroidism. | Kimio Maruta (Shinshu Univ., Surgery) | (17 minutes) |

Subject 29. Some Problems in Pharmacotherapy (2) Mode of Actions of Some Drugs.
(3 hours)

(place—Tokyo Univ., School of Medicine,
Main Bldg., Auditorium)

Chairman (chief) Kikuo Ogyu (Tokyo Univ., Pharmacology)
Hideo Yamamura (Chief of the 45th Section)
Hiroshi Kumagai (Chief of the 5th Section)

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| A. Pharmacological Consideration on Excitation and Sedation. | Reiji Imaizumi (Osaka Univ., Pharmacology) | (30 minutes) |
| B. Pharmacological Consideration on Mechanism of Central Reaction of Tranquillizer. | Tatsuo Kobayashi (Chiba Univ., Pharmacology) | (30 minutes) |
| C. La Serotonina in Farmacologia. | E. Trabucchi (Milano Univ., Italy) | (30 minutes) |
| D. The effect of some Drugs on the Autonomic Emotional Reactions in Man. | E. Jacobsen (Denmark, Pharmacology) | (30 minutes) |
| E. Speech. | | |
| 1. Electro-physiological Study of Some Psychotropic Remedy. | Kikuo Ogyu (Kyoto Univ., Pharmacology) | |
| 2. Study of Points and Mechanism of Action of Tranquilizer. | Hiroshi Kumagai (Tokyo Univ., Pharmacology)
Eikichi Hosoya (Keio Univ., Pharmacology) | |

Subject 36. Parasitic Infections (2) Schistosomiasis and Filariasis.

(3 hours)

(place—Tokyo Univ., School of Medicine,
No. 1 Bldg., 3 storied Room)

Chairman (chief) Yoshitaka Komiya (Institute for Research of Preventive Hygiene, Parasitology)
(chief) Seiichi Kitamura (President, Nagasaki Univ.)
Katsuo Akagi (Chief of the 10th Section)
Shojiro Asahina (Chief of the 37th Section)

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| A. Schistosomiasis Japonicum. | (Chairman) Yoshitaka Komiya (Institute for Research of Preventive Hygiene, Parasitology) | (5 minutes) |
| 1. Distribution and Epidemiology of Schistosomiasis Japonicum. | Koyo Okabe (Kurume Univ., Parasitology) | (20 minutes) |
| 2. Treatment of Schistosomiasis in Japan. | Saburo Sugiura (Showa College of Medicine, Medical Zoology) | (20 minutes) |

3. Preventive Measures for Schistosomiasis in Japan. Yoshitaka Komiya (Institute for Research of Preventive Hygiene, Parasitology) (20 minutes)
- B. Filariasis. (Chairman) Seiichi Kitamura (Nagasaki Univ., Parasitology) (10 minutes)
1. Epidemiology of Filariasis, especially Study of its Aspects of Infection and its Preventive Measures. Manabu Sassa (Institute for Research of Infectious Diseases) (15 minutes)
2. Growth of Filariasis in Intermediate Host. Nansaburo Omori (Nagasaki Univ., Institute of Climatology) (15 minutes)
3. Problem of Periodical Appearance of Microfilariasis. Daisuke Katamine (Nagasaki Univ., Institute of Climatology) (15 minutes)
4. Filariasis and its Therapy. Hachiro Sato (Kagoshima Univ., Internal Medicine) (15 minutes)

Subject 44. Tumors (7) Chemotherapy of Cancers (2) Clinical Aspects of Anticancer Drugs. (3 hours)

(place—Yomiuri Hall)

Chairman (chief) Kikuo Otsuki (Chief of Toranomon Mutual Aid Hospital)

Masaomi Ishikawa (Chief of the 26th Section)

Seiji Kimoto (Chief of the 22nd Section)

A. Findings of Clinical Effects of Anticancer Drugs.

1. Side from Internal Medicine. Yoshiyuki Koyama (Tokyo First Hospital, Internal Medicine) (20 minutes)
- Tatsuo Saito (Tohoku Univ., Internal Medicine) (20 minutes)
2. Their Surgical Side. Hajime Imanaga (Nagoya Univ., Surgery) (20 minutes)
3. Their Gynecological Side. Takashi Kobayashi (Tokyo Univ., Obstetrical Gynecology) (20 minutes)
- B. Combined Use of Surgical Operation and Chemotherapy. Eitaro Tokuyama (Kyoundo Hospital, Surgery) (20 minutes)
1. Present and Future of Chemotherapy of Cancers. Toshio Kurokawa (Institute for Research of Cancers) (20 minutes)
- Yuzo Tazaki (Institute for Research of Cancers) (20 minutes)
- Kentaro Shimizu (Tokyo Univ., Surgery) (20 minutes)

Subject 47. Tuberculosis (2) Immunity and Allergy in Tuberculosis.

(3 hours)

(place—Shigaku Kaikan)

Chairman (chief) Yoshio Takahashi (Hokkaido Univ., Institute of Tuberculosis)

Jiro Ishida (Chief of the 20th Section)

Taichi Nagano (Chief of the 44th Section)

- A. Significance of Allergy in Inhibitory Mechanism of Tuberculosis. Shiro Someya (National Institute of Public Health, Institute for Research of Microbes) (20 minutes)

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| B. Phenomenological Consideration of Tuberculosis Allergy. | Tatsu Ohara (Hokkaido Univ., Institute for Research of Tuberculosis) | (20 minutes) |
| C. Immunity and Allergy in Tuberculosis centering about Antibody. | Chuji Shindo (Institute for Research of Infectious Diseases) | (25 minutes) |
| D. Effects of Desensitization upon Process of Infection. | Ken Yanagisawa (Institute for Research of Preventive Hygiene) | (25 minutes) |
| E. Significance of Allergy in Formation of Cavity. | Yuichi Yamamura (Kyushu Univ., Biochemistry) | (20 minutes) |
| F. Allergy in Leprosy. | Kan Tajiri (Tama Zensei-en Leprosarium) | (25 minutes) |

Subject 48. Interrelationship between Tuberculosis and Leprosy (Symposium).

(3 hours)

(place—Tokyo Univ., School of Laws, No. 25 Room)

Cairman (chief) Rokuzo Kobayashi (Chief of Institute of Leprosy)
Kanehiko Kitamura (Chief of the 29th Section)
Enjiro Takizawa (Chief of the 6th Section)

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| A. Vicissitudes of Lepers in Japan. | Ikyu Omura (Public Health Bureau) | (25 minutes) |
| B. Relation between Leprosy and Tuberculosis viewed from Pathological Standpoint. | Tomosaburo Ogata (Tokyo Univ., Pro. Emeritus) | (25 minutes) |
| C. Interrelationship between Tuberculosis and Leprosy viewed from Immunological Standpoint. | Ken Yanagisawa (Institute for Research of Preventive Hygiene, Tuberculosis) | (25 minutes) |
| D. Serological Relation between Tuberculosis, Leprosy and Syphilis. | Masahide Abe (Institute of Leprosy, Serology) | (25 minutes) |
| E. Interrelationship between Tuberculosis and Leprosy viewed from Therapeutical Standpoint. | Kihei Tanioku (Shinshu Univ., Dermatology) | (25 minutes) |

Subject 51. Blood (1) Recent Studies in Blood Corpuscles. (3 hours)

(place—Chiyoda District Hall)

Chairman (chief) Seizo Katsunuma (President of Nagoya Univ.)
Etsuzo Komiya (Chief of the 17th Section)
Shigeo Okinaka (Chief of the 8th Section)

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| A. Constitution of Reticulocytes and Erythrocytes. | Takuzo Oda (Okayama Univ., Pathology) | (20 minutes) |
| B. Hematopoiesis and Folic Acid, Vitamin B ₁₂ Metabolism. | Koichi Wakizaka (Kyoto Univ., Internal Medicine) | (20 minutes) |
| C. Study in Iron and Hematocytic Metabolism. | Kiku Nakao (Gumma Univ., Internal Medicine) | (20 minutes) |
| D. Duration of Erythrocytes and its Clinical Significance. | Masabumi Komiya (Tokyo Univ., Internal Medicine) | (20 minutes) |
| E. Separated Plasmasome and its Nature. | Seiji Takizawa (Nagoya Univ., Internal Medicine) | (20 minutes) |
| F. Culture of Blood Cells and its Clinical Application. | Kiyoshi Hiraki (Okayama Univ., Internal Medicine) | (20 minutes) |

- G. Regulation of Blood Corpuscles. Yasuo Kawakita (Kumamoto Univ., Internal Medicine) (20 minutes)
- H. Non Catalase Hematonosis. Shigeo Takahara (Okayama Univ., Otorhinology) (20 minutes)

Subject 52. Blood (2) Plasma Proteins and Blood Coagulation. (3 hours)

(place—Nihon Univ., School of Dentistry, Auditorium)

Chairman (chief) Katsuji Kato (Tokyo College of Medicine, Physiology)

Kunio Kawaishi (Chief of the 48th Section)

Tsuneaki Nakayama (Chief of the 46th Section)

- A. Plasma Proteins and their Clinical Aspects. Kazuo Miyoshi (Tokushima Univ., Internal Medicine) (25 minutes)
- B. Plasma Proteins and Location of Antibody viewed from Serological Standpoint. Naoshi Matsubashi (Tokyo Univ., Serology) (25 minutes)
- C. Factors of Blood Coagulation. Matsuzo Matsuoka (Shinshu Univ., Internal Medicine) (25 minutes)
- D. Blood Coagulation and its Disturbances. Goro Kamimae (Osaka Univ., Surgery) (25 minutes)
- E. Pathology and Clinic of Plastocytes. Hisao Morita (Tokyo College of Medicine, Internal Medicine) (25 minutes)

Subject 62. Hypertension (2) Treatment of Hypertension. (3 hours)

(place—Kyoritsu Hall)

Chairman (chief) Toru Hara (Osaka College of Medicine, Internal Medicine)

Yoshio Oshima (Chief of the 15th Section)

Yoshio Mikamo (Chief of the 43rd Section)

- A. Hypertension and Arteriosclerosis. Mototaka Murakami (Kanazawa Univ., Internal Medicine) (20 minutes)
- B. Research of Hypertension and Eyeground. Masakichi Mikuni (Niigata Univ., Ophthalmology) (20 minutes)
- C. Dietary Treatment of Hypertension. Tsuneo Yoshida (Osaka Univ., Internal Medicine) (20 minutes)
- Seiichi Asano (Keio Univ., Internal Medicine) (20 minutes)
- D. Pharmacology of Depressant. Koshiro Nakazawa (Nagasaki Univ., Pharmacology) (20 minutes)
- E. Clinical Aspects of Depressant. Zoroku Saito (Chiba Univ., Internal Medicine) (20 minutes)
- F. Thermal Therapy of Hypertension. Yoshio Oshima (Tokyo Univ., Physical Therapy) (20 minutes)

Subject 69. Vomiting and Diarrhea in Children. (3 hours) (place—Kudan Kaikan Hall)

Chairman (chief) Keizo Ota (Tokyo Medical and Dental College,
Pediatrics)

Tadao Takatsu (Chief of the 18th Section)

Kiyoshi Saito (Chief of the 42nd Section)

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| A. Diarrhea and Colitis Germs. | Fumi Nakamura (Keio Univ., Pediatrics) | (20 minutes) |
| | Nazomu Kozakai (Tokyo First Hospital) | (15 minutes) |
| B. Nutritive Metabolism in Babies' Apepsia. | Toshio Takai (Osaka City Univ., Pediatrics) | (20 minutes) |
| C. Dietary Treatment of Babies' Apepsia. | Keizo Ota (Tokyo Medical and Dental College, Pediatrics) | (20 minutes) |
| D. So-called Autotoxicosis. | Munenori Enjoji (Kyushu Univ., Pediatrics) | (20 minutes) |
| E. Cyclic Vomiting Diseases. | Tadao Takatsu (Tokyo Univ., Pediatrics) | (20 minutes) |
| F. Movement of Circulation at the Vomiting. | Tokuro Nagayama (Kagoshima Univ., Pediatrics) | (20 minutes) |
| G. Invited lecture. | F. Gomez S. (Mexico) | (30 minutes) |

Subject 71. Dysentery. (3 hours) (place—Sankei International Hall)

Chairman (chief) Keigo Uchiyama (Nihon College of Medicine,
Internal Medicine)

Saburo Nagaki (Chief of the 19th Section)

Asaichiro Akiba (Chief of the 9th Section)

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| A. Epidemiology of Dysentery (Ekiri). | Shinichi Matsuda (National Institute of Public Health) | (25 minutes) |
| B. Growth Mechanism of Resistance of Dysentery Bacillus. | Asaichiro Akiba (Tokyo Univ., Bacteriology) | (25 minutes) |
| C. Distribution of Antibiotic Resistances of Dysentery Bacillus and Clinic of Dysentery. | Kunitaro Ochiai (Nagoya City Hospital) | (25 minutes) |
| Clinical Consideration of Antibiotic Resistant Dysentery Bacillus. | Kazumine Kobari (Komagome Hospital) | (25 minutes) |
| Distribution of Antibiotic Resistances and its Clinic. | Saburo Nagaki (Ebara Hospital) | (25 minutes) |

Subject 78. Problems on Mental Hygiene (2). (3 hours) (place—Sankei Hall)

Chairman (chief) Taiei Miura (Keio Univ., Neurology)

Masakichi Ueno (Chief of the 11th Section)

Hikozaemon Hasato (Chief of the 12th Section)

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| A. Mental Danger at the Youth. | Taiei Miura (Keio Univ., Neurology) | (20 minutes) |
| B. Mental Danger at the Old Age. | Jiro Kaneko (Osaka Univ., Neurology) | (25 minutes) |

- C. Delinquent Boys. Kokichi Higuchi (Ministry of Justice)
(25 minutes)
- D. Formation and Development of Character (Observation from Comparison of Twins). Keizo Okada (National Institute of Mental Hygiene) (25 minutes)

Subject 80. Electroencephalogram. (3 hours) (place—Tokyo Univ., School of Laws, No. 31 Room)

Chairman (chief) Koichi Motokawa (Tohoku Univ., Physiology)
Kentarō Shimizu (Chief of the 24th and 47th Section)
Takehiko Tozuka (Chief of the 3rd Section)

- A. Study of Central Nerves by Microelectrode Method. Yasuji Katsuki (Tokyo Medical and Dental College, Physiology) (23 minutes)
- B. Electroencephalogram.
1. Electroencephalographical Study of Conditioned Reflex. Naosaburo Yoshii (Osaka Univ., Physiology) (23 minutes)
 2. Application of Analysis of Electroencephalogram. Bunichi Fujimori (Hokkaido Univ., Physiology) (23 minutes)
 3. Change of Consciousness and Electroencephalogram. Yasuo Shimazono (Tokyo Univ., Neurology) (23 minutes)
 4. Internal Diseases and Electroencephalogram. Yukio Shimoda (Tottori Univ., Internal Medicine) (23 minutes)
 5. Electroencephalogram in the domain of Cerebral Surgery. Keishi Sano (Tokyo Univ., Surgery) (23 minutes)
 6. Invited lecture:
Die Mikrophysiologie corticaler Neurome und ihre Bedeutung für die Hirnfunktionen und die Sinnesphysiologie. R. Jung (Frieburg Univ., Germany) (42 minutes)

Subject 84. Specific X-Ray Diagnosis. (3 hours) (place—Tokyo Univ., School of Science, No. 2 Bldg.)

Chairman (chief) Yoshihiko Koga (Tohoku Univ., Radioactivity)
Kemsuke Tsukamoto (Chief of the 32nd Section)
Toshizo Ofuji (Chief of the 41st Section)

- A. Significance of Specific X-Ray Diagnosis. Yoshihiko Koga (Tohoku Univ., Radioactivity) (20 minutes)
- B. Laminography. Shiroshi Tasaka (Tokyo Univ., Radioactivity) (25 minutes)
- C. Magnification Radiography. Hiroshi Tasaka (Tokyo Univ., Radioactivity) (25 minutes)
- D. High Potential Radiography. Katsutoshi Yoshimura (Kanto Communication Hospital, Radioactivity) (25 minutes)

E. Invited lecture:

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| Isotopes in Clinical Medicine. | J. H. Lawrence (California Univ., U.S.A.) |
| Cyclotron Hypophysectomy for
Advanced Breast Cancer. | (30 minutes) |
| Malignant Diabetes and Acromegaly. | |

April 5, (Sun.) Morning.

- Subject 17. Diabetes.** (3 hours) (place—Sabo Kaikan)
- Chairman (chief) Yoshito Kobayashi (Tokyo Univ., Pharmacology)
Kintaro Yanagi (Chief of the 14th Section)
Shigeo Okinaka (Chief of the 8th Section)
- A. Frequency and Early Therapy of Diabetes in Japan. Yoshito Kobayashi (Tokyo Univ., Pharmacology) (25 minutes)
- B. Metabolic Abnormality in Diabetes. Nobusada Katsuya (Toranomon Hospital, Internal Medicine) (20 minutes)
Masayuki Oda (Tokyo Univ., Internal Medicine) (20 minutes)
Masahisa Wada (Osaka Univ., Internal Medicine) (20 minutes)
Shigeru Ohashi (Tokyo Univ., Pharmacology) (20 minutes)
- C. Treatment of Diabetes by Oral administered Drugs. Mitsushige Nakayama (Tokyo Women's Medical College, Internal Medicine) (25 minutes)
- Subject 30. Multiplication of Virus.** (3 hours) (place—Sankei International Hall)
- Chairman (chief) 'Yasuichi Nagano (Institute for Research of Infectious Diseases)
- Tomoichiro Akiba (Chief of the 9th Section)
Saburo Nagaki (Chief of the 19th Section)
- A. Multiplication of Vegetable Virus in the Body of Carrying Insects. Sadakichi Fukushi (Hokkaido Univ., Agriculture) (20 minutes)
- B. Le sort des virus dans l'organisme des arthropodes vecteurs. P. Hauduroy (Lausanne Univ., Switzerland) (20 minutes)
- C. Multiplication of Bacteriophage. Itaru Watanabe (Tokyo Univ., Science) (20 minutes)
- D. Multiplication of Animal Virus. Seichi Matsumoto (Kyoto Univ., Institute for Research of Virus) (20 minutes)
Tokukichi Nojima (Institute for Research of Infectious Diseases) (20 minutes)
Konosuke Fukai (Osaka Univ., Institute for Research of Microbes) (20 minutes)

Subject 33. Tsutsugamushi Disease. (3 hours) (place—Nihon Univ., School of Dentistry, Auditorium)

Chairman (chief) Takeo Tamiya (Tokyo Univ., Prof. Emeritus)
Hikozaemon Hasato (Chief of the 12th Section)
Etsuzo Komiya (Chief of the 17th Section)

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| A. Recent Progress in Studies of Tsutsugamushi Disease in Japan. | Takeo Tamiya (Tokyo Univ., Prof. Emeritus) (10 minutes) |
| B. Its Etiological Side. | Hikozaemon Hasato (Tokyo Univ., Hygiene) (20 minutes) |
| C. Multiplication and Constitution of Rickettsia. | Noboru Azuma (Kyoto Univ., Institute for Research of Virus) (20 minutes) |
| D. Epidemiology of Tsutsugamushi. | Masami Kitaoka (Institute for Research of Preventive Hygiene) (20 minutes) |
| E. Varieties and Distribution of Tsutsugamushi and its Host. | Rokuro Kano (Tokyo Medical and Dental College, Medical Zoology) (20 minutes) |
| F. Relation of Tsutsugamushi with its Host. | Yasushi Asanuma (Institute for Research of Resources) (20 minutes) |
| G. Clinical Aspects of Tsutsugamushi Disease. | Juko Katsura (Niigata Univ., Internal Medicine) (20 minutes) |
| H. Prevention of Tsutsugamushi. | Nobuo Kumada (Tokyo Medical and Dental College, Medical Zoology) (20 minutes) |
| I. Supplementary Discussion. | (30 minutes) |

Subject 34. Mycotic Infections. (3 hours) (place—Shigaku Kaikan)

Chairman (chief) Yoshio Mikamo (Chief of Sanraku Hospital)
Kanehiko Kitamura (Chief of the 29th Section)
Ichiro Kirikae (Chief of the 28th Section)

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| A. Clinical Aspects of Mycotic Infections. | |
| 1. Aspects of Internal Medicine. | Yoshio Mikamo (Sanraku Hospital, Internal Medicine) |
| 2. Dermatological Side. | Yoshisada Takahashi (Tohoku Univ., Dermatology) |
| 3. Otomycosis. | Kenji Yamashita (Kyoto National Hospital) |
| B. Pathology of Mycotic Infections. | Jin Miyake (Tokyo Univ., Pathology) |
| C. Infection and Immunity of Mycosis. | Kazuo Iwata (Tokyo Univ., Bacteriology) |
| D. Antimycotic Substances. | Kokichi Fukushima (Tokyo Univ., Internal Medicine) |
| E. Invitation lecture:
Topic undecided. | N. F. Conant (Duke Univ., U.A.) |

Subject 37. Diseases and Animal. (3 hours) (place—Tokyo Univ., School of Medicine, Main Bldg., Auditorium)

Chairman (chief) Shojiro Asahina (Institute for Research of Preventive Hygiene)
Shukichi Matsuoka (Chief of the 36th Section)
Shinji Katsuki (Chief of the 40th Section)

- A. Recent Advance in Studies of Hygienic Zoology.
1. Extermination of Rats, especially in connection with Population Dynamics. Ryo Tanaka (Kochi Women's College, Biology) (25 minutes)
 2. Fleas; Present Condition of their Studies. Zenemon Ono (Hokkaido Univ., Institute of Health) (25 minutes)
 3. Mosquitoes; their Bloodsucking and Sensation. Teruhiko Hosoi (Tokyo College of Technology, Biology) (25 minutes)
 4. Gnats, Mosquitoes; especially Problem of Bites. Misao Nagahana (Tottori Univ., Public Hygiene) (25 minutes)
 5. Problem in Application of Insecticides. Takeshi Suzuki (Institute for Research of Preventive Hygiene) (25 minutes)
- B. Invited lecture:
Hygienic Zoology in Formosa, especially Present Condition of Studies of Malaria. Cheng Te Chen (Chief of Institute of Malaria, Formosa)

Subject 39. Tumors (2) Cancer and Hormones. (3 hours) (place—Yomiuri Hall)
Chairman (chief) Shigeki Mori (Yamaguchi College of Medicine, President)
Tokuji Ichikawa (Chief of the 30th Section)
Masaomi Ishikawa (Chief of the 26th Section)

- A. Endocrinological Metabolism in Breast Cancer. Masao Fujimori (Mitsui Welfare Foundation, Surgery)
- B. Endocrinological Metabolism in Uterine Cancer. Kohachiro Koga (Hiroshima Univ., Obstetrical Gynecology)
- C. Prostatic Carcinoma and Hormone. Tokuji Ichikawa (Tokyo Univ., Urinology)
- D. Hormone Treatment of Cancers. Satoru Kuwabara (Tottori Univ., Surgery)
- E. Cancers and Hormone. Shigeki Mori (Yamaguchi College of Medicine)

Subject 58. Circulation (3) Pulmonary Circulation, Renal Circulation and Artificial Kidney. (3 hours) (place—Sankei Hall)
Chairman (chief) Tando Misao (Kyushu Univ., Prof. Emeritus)
Kikuo Otsuki (Chief of the 34th Section)
Tsuneaki Nakayama (Chief of the 46th Section)

- A. Pulmonary Circulation. Shiroshi Sasamoto (Keio Univ., Internal Medicine) (15 minutes)
Zoroku Saito (Chiba Univ., Internal Medicine) (15 minutes)
- Pulmonary Circulation in Cardiac Insufficiency, especially in Valvular Disturbances. Junichi Mitsuse (Yamaguchi College of Medicine, Internal Medicine) (15 minutes)
Makoto Murao (Tokyo Univ., Internal Medicine) (15 minutes)
Miyoshi Urabe (Kanazawa Univ., Surgery) (15 minutes)

- B. Renal Circulation. Kenzo Oshima (Nihon Univ., Internal Medicine) (15 minutes)
 Problem of Renal Factors in Congestive Cardiac Insufficiency. Toshiya Shioda (Kyoto Univ., Internal Medicine) (15 minutes)
- C. Artificial Kidney. Kisuo Shibuzawa (Gumma Univ., Surgery) (15 minutes)
 Tsunamasa Inao (Tokyo Univ., Surgery) (15 minutes)

Subject 65. Gastritis and Gastric Ulcer. (3 hours) (place—Kudan Kaikan Hall)

Chairman (chief) Toshio Kurokawa (President of Tohoku Univ.)
 Shinichi Kawashima (Chief of the 21st Section)
 Kentaro Shimizu (Chief of the 24th and 47th Section)

- A. Gastritis.
 Its Internal Side (including Gastroscopy). Kenji Tsuneoka (Tokyo Univ., Internal Medicine) (25 minutes)
 Takao Sakida (Tokyo Univ., Internal Medicine) (25 minutes)
 Aspects of Internal Medicine (by Gastro Camera). Eisuke Hagamuchi (Medical and Dental College, Surgery) (25 minutes)
 Its Surgical Side (Chronic Gastritis viewed from Operation Samples).
- B. Gastric Ulcer.
 Its Pathological Side. Atsushi Okabayashi (Chiba Univ., Pathology) (25 minutes)
 Shoichi Yamagata (Tohoku Univ., Internal Medicine) (25 minutes)
 Aspects of Internal Medicine (Diagnosis of Gastric, Duodenal Ulcer and Limitation of its Internal Therapy.)
 Its Surgical Side (Fundamental and Clinical Aspects of Gastric, Duodenal Ulcer). Minosu Oi (Jikei-kai Univ., Surgery) (25 minutes)
- C. Invited lecture:
 A6-to-10ar Followup of the surgical treatment of Duodenal, gastric and gastrojejunal ulcer at the Mayo Clinic. W. Walters (Mayo Clinic, U.S.A.) (30 minutes)

Subject 66. Hepatitis and Hepatocirrhosis. (3 hours) (place—Kyoritsu Hall)

Chairman (chief) Ko Inoue (Kyoto Univ., Prof. Emeritus)
 Seiji Kimoto (Chief of the 22nd Section)
 Yoshio Oshima (Chief of the 15th Section)

- A. Clinic of Epidemic Hepatitis and Serum Hepatitis. Yoshio Kosaka (Okayama Univ., Internal Medicine) (20 minutes)
 Metabolic Abnormaly and its Therapy. Kiichi Oji (Osaka Univ., Internal Medicine) (20 minutes)

- B. Hepatic Circulation. Hideo Ueda (Tokyo Univ., Internal Medicine) (20 minutes)
 Studies on Hepatic Circulation. Kazuo Honjo (Kyoto Univ., Surgery) (20 minutes)
 Toru Miyaji (Osaka Univ., Pathology) (20 minutes)
- C. Hepatocirrhosis. Seiji Kimoto (Tokyo Univ., Surgery) (20 minutes)
 Portal Hypertension. Hajime Imanaga (Nagoya Univ., Surgery) (20 minutes)
 Study in Ascites. Hajime Imanaga (Nagoya Univ., Surgery) (20 minutes)

Subject 79. Recent Studies of the Nervous System. (3 hours)

(place—Tokyo Univ., School of Laws, No. 25 Room)

Chairman (chief) Teizo Ogawa (Tokyo Univ., Anatomy)

(chief) Hidetoshi Noda (Kyoto Prefectural Univ., Anatomy)

(chief) Shuzo Naka (Kyoto City Univ., Alienism)

Taiei Miura (Chief of the 23rd Section)

Masaharu Arai (Chief of the 2nd Section)

- A. Observation of Nervous System by Tissue-Culture. (Chairman) Teizo Ogawa (Tokyo Univ., Anatomy)
1. A Consideration on Neurotropism. Junnosuke Nakai (Tokyo Univ., Anatomy)
 2. Michio Okamoto (Kanagawa Univ., Anatomy)
 3. Yoshimitsu Tsujiyama (Keio Univ., Neurology)
- B. Neurosecretion. (Chairman) Hidetoshi Noda (Kyoto Univ., Anatomy)
- Invited lecture:
 Uber die Bedeutung der Neurosekretion im Zwischenhirn-Hypophysensystem. W. Bargmann (Germany) (30 minutes)
- Histological Studies in the System of Nervous Secretion. Yutaka Sano (Kyoto Prefectural Univ., Anatomy) (15 minutes)
- C. Cerebral Metabolism. (Chairman) Shuzo Naka (Osaka City Univ., Alienism)
- Pathochemistry and Clinic of Nervous System. Shuzo Naka (Osaka City Univ., Alienism) (20 minutes)
- Aromatic Monoamine of the Brain. Isamu Sano (Osaka Univ., Alienism)
- D. Hepatocerebral Diseases. Tadashi Inose (Yokohama Univ., Alienism) (20 minutes)
 Masami Yoshikawa (Tokyo Univ., Internal Medicine)

Subject 83. Radiation Hazards and their Control. (3 hours)

(place—Tokyo Univ., School of Laws, No. 31 Room)

Chairman (chief) Goro Goto (Kyoto Red Cross Hospital)

Kensuke Tsukamoto (Chief of the 32nd Section)

Hiroshi Kumagai (Chief of the 5th Section)

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| A. World Tendency in regard with Atomic Bomb Hazards and their Control. | Masao Tsuzuki (Central Hospital of Japan Red Cross Society) | (30 minutes) |
| B. Occupational Radiation Hazards and their Control. | Goro Goto (Kyoto Red Cross Hospital) | (20 minutes) |
| C. Radiation and Hematopoietic Organs. | Susumu Hibino (Nagoya Univ., Internal Medicine) | (20 minutes) |
| D. Maximum Permissible Dose of Radiation. | Hideo Irie (Kyushu Univ., Radiation) | (20 minutes) |
| E. Radiation and Heredity. | Daigoro Moriwaki (Tokyo Metropolis Univ., Biology) | (20 minutes) |
| F. Pharmacological Therapy of Radiation Hazards. | Yosoji Ito (Tokyo Univ., Pharmacology) | (20 minutes) |
| G. Public Hazards by Radiation and their Control. | Takeo Suzuki (National Institute of Public Health) | (20 minutes) |

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The possibility of massive dose therapy by oral administration is also one of its superior properties.

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