

NEWS AND NOTES

Information concerning institutions, organizations and individuals connected with leprosy work, scientific or other meetings, legislative enactments and other matters of interest.

SECOND CARVILLE CONFERENCE, 1958

The Second Conference on Progress and Potentials in Leprosy Investigations was held at the U.S.P.H.S. Hospital at Carville, La., March 4-6, 1958. This conference was sponsored by the Inter-Bureau Advisory Committee on Leprosy, U.S.P.H.S., with Dr. Chapman H. Binford in charge of its planning. This meeting, in which nearly 75 persons participated, is held to have been especially significant because it afforded scientists studying leprosy an opportunity to discuss related problems with scientists working in other fields.

The program comprised six sessions, including an evening symposium on "non-tuberculous mycobacterial diseases of special interest to investigators of human leprosy." The official report ("review"), which was made available in printed form late in the year, includes abstracts of almost all presentations. They cannot be reproduced here in full; some are mentioned briefly, while of others the gist or high points are given. The interested reader could presumably obtain a copy on request of the Dept. of Health, Education and Welfare, U. S. Public Health Service, Washington, D. C. (Publ. No. 641.)

Clinical Session, March 4, 9:00 a.m.:

JOHNWICK, E. B. Introduction. Welcoming the visitors and presenting the members of the hospital staff.

WOLCOTT, R. R. Classification of leprosy. An exposition of the Madrid classification, particularly of the two major types.

FITE, G. L. Etiology and pathogenesis of leprosy. The factors which determine the type of tissue reaction are essentially unknown, but variations in hypersensitivities are clearly analogous in some measure to the variants.

MEYER, W. H. Control of leprosy. There being no evidence of intermediate agents of transmission, the standard questions apply: source, route of infection, contacts, and prevention of future exposures.

(The program provided for clinical presentations, of lepromatous cases by Dr. R. R. Wolcott, and of tuberculoid cases by Dr. K. E. Ambrose.)

Scientific session (1), March 4, 1:30 p.m.:

WAGNER, C. J. (substituting for K. R. Nelson). Greetings. (Followed, according to the program, by the chairman's introduction, by Dr. C. H. Binford.)

HANKS, J. H. AND WALLACE, J. H. The behavior of non-cultivated mycobacteria in tissue cells *in vitro*. The conditions essential for success in cell cultures with the human and rat leprosy bacilli have not been met by the several factors enumerated. Intracellular inquiry into the properties of the bacilli themselves is called for.

WALLACE, J. H. Leucocytic transfer of delayed sensitivity to normal guinea pigs from rats. Although rats are incapable of displaying skin reactions of the tuberculin (or the Mitsuda) type, they do develop systemic sensitivity to tuberculin. Starting from this point the author has found that, by use of peritoneal exudate cells from rats with murine leprosy, local sensitivity to tuberculin and to killed suspensions of the murine bacillus can be established intracutaneously in normal guinea-pigs. It is suggested that by this means it may be possible to assay the immunologic state of cells from lepromin-negative humans.

SHEPARD, C. C. Experience with human mycobacterial disease agents in human and simian cells in tissue culture. This lengthy abstract covers a wide field, and all of it is needed for an understanding of the matter. With *M. leprae*, efficient uptake by the cells was achieved with horse serum media. The three types of cells used can be maintained for different periods: HeLa, 1-2 months; monkey kidney, 2-3 months; human amnion, 6-8 months. The results so far are tentative because of technical difficulties, but as yet obvious growth of the bacilli has not been seen.

GREENE, H. S. N. Tissue transplantation in the study of infectious diseases, with particular reference to leprosy. Tissues can be transplanted homologously and heterologously to the anterior chamber of the eye or to the brain. With reference to leprosy, embryonic human tissue, or embryonic guinea-pig tissue, infected *in vitro* and transplanted to the guinea-pig offers an excellent nidus for the growth of the Hansen bacillus. Such infections have been carried through several passages.

RABSON, A. S. Studies of *Mycobacterium lepraemurium* in tissue cultures of neoplastic murine phagocytes. The cell cultures used were two strains of phagocytes derived from murine malignant lymphomas. Two experiments with these cells had not resulted in multiplication of the murine bacillus.

CHANG, Y. T. Evolution of murine leprosy. A study of developments in mice inoculated intraperitoneally and killed after various intervals. One conclusion was that the generation time of the bacillus in the spleen is 10.7 days.

CHANG, Y. T. Behavior of *Mycobacterium lepraemurium* in macrophages. Among many failures, in a few cultivations of infected peritoneal cells marked elongation and then tremendous increase in numbers of intracellular bacilli were observed, but not in cultures treated with isoniazid.

MILLAR, J. W. The *Mycobacterium leprae* endotoxin postulate. The tubercle bacillus has been shown to produce an endotoxin, and it is possible that the leprosy bacillus may do so. There are "evidences that hypersensitivity factors are present—vascular lesions, a necrotizing vasculitis, Aschoff-like bodies, erythema nodosum, and the Lucio phenomenon." [In the terminology of Latapí, the Lucio phenomenon is a necrotizing vasculitis.]

Symposium, March 4, 7:00 p.m.:

The following subjects were presented informally, and abstracts are lacking. Rat leprosy, by G. L. Fite. Origin of the Hawaiian strain of rat leprosy, by L. F. Badger. Leprosy of the water buffalo, by J. A. Doull. Leprosy-like granuloma in Bolivian frogs, by C. H. Binford. The following subjects were given in greater detail.

LARSEN, A. B. John's disease and its causative agent, *Mycobacterium paratuberculosis*. The rather long abstract covers the subject broadly.

FELDMAN, W. H. *Mycobacterium ulcerans* and *Mycobacterium balnei* infections in man. Summarizing knowledge of the peculiar ulcerative condition discovered in Australia, and the swimming-pool infection discovered in Sweden which produces benign tuberculoid skin granulomata.

SHEPARD, C. C. Classification of certain non-tuberculous mycobacteria according to growth in HeLa cells. A classification of the cultivable pathogenic mycobacteria, excluding *M. tuberculosis*, based on their growth rates. (See abstract of the author's presentation at the Tokyo congress, in the preceding issue of THE JOURNAL.)

Scientific session (2), March 5, 8:45 a.m.:

BRODIE, A. F. AND GRAY, C. T. (presented by J. H. Hanks). Energy transforming mechanisms in the mycobacteria. Oxidative phosphorylation is the process whereby oxygen and substrates are utilized to transform inorganic phosphate into high-energy phosphate, which is the intermediary for energy exchanges in biological systems. It is a major source of energy in all oxygen-consuming forms of life, and the sole mechanism employed by strictly aerobic forms such as the mycobacteria. It occurs by similar mechanisms in both animals and bacteria. In mammalian cells it is conducted by complete structures, the mitochondria. In *M. phlei*, the authors have found, it is conducted—in a proper supernate—by particles that can be separated after disruption of the bacteria, particles which possess osmotic membranes and “a high state of structural integrity.” (For the rest, including the role of vitamin K₁, the reader must be referred to the original abstract and articles which the authors have published on the subject.)

MASON, K. E. Attempt to influence the survival of *Mycobacterium leprae* in different species of laboratory animals fed diets low in vitamin E and high in unsaturated fats. Reference is made to a preliminary study, by intratesticular inoculations, that was begun in 1954 by the author with Bergel [and has been pursued actively by the latter since then, e.g., THE JOURNAL **26** (1958) 92]. The author conducted a second experiment in 1956, but the results of a transfer were negative. Further experiments are under way.

ARONSON, J. D. AND HENDERSON, H. J. Localization and persistence of *Mycobacterium leprae* in the organs of some cold-blooded animals. Findings suggestive of multiplication.

BINFORD, C. H. Animal inoculation with *Mycobacterium leprae*; report after two years experience. After work since January 1956 the author could only say, “Although histologic studies showed no convincing evidence of multiplication of *Mycobacterium leprae*, at the inoculation sites in some animals granulomatous reaction with acid-fast bacilli was observed.” [For developments in the period between March and October, see the author’s report at the Tokyo congress, THE JOURNAL **26** (1958) 318-324.]

FELDMAN, W. H. Further comments regarding the possible experimental transmission of leprosy. A revision of previously-offered suggestions, with emphasis on the approach by Gózszy and Kató with the rat leprosy bacillus. They produced with glycogen a peritoneal exudate previous to intraperitoneal inoculation, followed by daily subcutaneous injections of an antihistamine. [See Kató, THE JOURNAL **25** (1957) 193-206.]

DOULL, J. A., RODRIGUEZ, J. N., DAVISON, A. R., TOLENTINO, J. G. AND FERNANDEZ, J. V. Clinical evaluation studies in lepromatous leprosy. Third Series. Nicotinamide and BCG vaccination as supplements to diaminodiphenyl sulfone (DDS). No evidence was seen that either supplement was beneficial. Erythema nodosum leprosum was not especially evoked by the BCG vaccination. [See THE JOURNAL **26** (1958) 219-235.]

Scientific session (3), March 5, 1:30 p.m.:

RIORDAN, D. C. Reconstruction of the hand. [Title in the program, but no abstract published.]

WINKELMANN, R. K. Cutaneous nerves in leprosy. Recently developed techniques for demonstrating, by silvering in frozen sections, the superficial terminal nerve plexuses and endings in the dermis offer a new approach to the study of early nerve lesions in leprosy.

MILLAR, J. W. AND RAPAPORT, F. T. A review of recent experimental findings in delayed hypersensitivity phenomenon with special reference to their bearing on the immunity and pathogenesis of leprosy in man. Suggests that it would be of great interest to determine whether or not delayed hypersensitivity to products of *M. leprae* can be transferred by means of peripheral blood leucocytes obtained from specifically

sensitive donors. The individual leprosy patient's immune status appears to be a manifestation of this specific delayed hypersensitivity. [In tuberculosis, it is generally agreed nowadays, there is a distinction between immunity and hypersensitivity.]

MUELLING, R. J., JR., ROSS, SR. H. AND LOYD, H. L. Immunoelectrophoresis of leprosy serum; preliminary report. Preliminary studies indicate that the protein rises in leprosy are immunologically specific for the region in which they travel by paper electrophoresis. (The authors offer to supply complete technical details on request.)

ROSS, SR. H. Estimation of serum protein fractions by immunochemical methods. This note tells of a method of determining human serum proteins by use of antichicken sera and turbidimetry.

GUINTO, R. S. AND MABALAY, M. C. (presented by J. A. Doull). Paper electrophoresis in the study of serum proteins in leprosy. A study of the sera of leprosy patients under treatment is being made to see if, as in tuberculosis, certain abnormalities are related to severity of the disease and tend to return to normal with clinical improvement. In the first tests of 426 cases there was a slight but definite tendency for the gamma globulin levels to increase with severity.

FITE, G. L. The Shaumann body. This body, which is an intracellular "protein" condensate (resulting, it is suggested, from an intracellular antigen-antibody reaction), is rarely seen in leprosy lesions. It was studied in rat leprosy lesions in Syrian hamsters.

Scientific session (4), March 6, 8:45 a.m.:

BADGER, L. F. Epidemiological characteristics of leprosy in the United States. The author points out that the factors of the epidemiology of leprosy in one region will not necessarily apply to another region. Statements regarding other regions do not apply to the United States. Data on familial incidence indicates that leprosy is more contagious than polio or diphtheria—recognizing that comparisons of chronic and acute diseases are unsatisfactory. [For other data, some of which are contrary to usually-accepted views, the original abstract should be consulted.]

KLUTH, F. C. Examination of household contacts to leprosy patients as a case finding technique; experience in Texas, 1950-1954. Of 606 contacts who were found and permitted examination, 114 had been exposed to nonlepromatous leprosy and 492 to lepromatous cases. In the former group only 1 case was found, and it apparently antedated the index case. In the latter group 14 cases were found.

DOULL, J. A. AND GUINTO, R. S. The "natural" Mitsuda reactivity to lepromin is not adequately explained by prior contact to *M. leprae* or infection with *M. tuberculosis*. Some third factor is involved and further studies are indicated. "Lepromin reactivity is apparently a type of nonspecific antibody response, very common throughout the world," and discovery of its origin is desirable.

BYERS, J. L. AND ALLEN, J. H. Ocular lesions of leprosy. To quote from the first paragraph: A review of ocular lesions in tuberculoid and lepromatous leprosy was given, with mention of typical lepromatous corneal changes in a case of Lucio leprosy.

ROSS, SR. H. Complement fixation tests in leprosy using spirochetal antigens, with special reference to the Reiter strain. Ordinary complement-fixation tests used for syphilis give many biologically false-positive results. The one done with the protein of the Reiter cultured treponema (RPCF) gave only 4.0% positives in 250 sera from leprosy patients, with 96% agreement with the TPI test.

GARSON, W. Discussion of the differentiation of leprosy and syphilis by serological methods. It is noted that false-positive serological reactions are "somewhat rare" in tuberculoid leprosy and common in lepromatous leprosy, most in the Lucio form. The situation is much better with respect to the newer tests, with special reference to the RPCF test developed cooperatively by Sister Hilary Ross and the writer's laboratory.

[According to the program, H. Ruge was to have a report on preliminary complement fixation results, clinical evaluation studies, Leonard Wood Memorial, fourth series (presented by J. A. Doull), but there is no further mention and no abstract of this report.]

NEWS ITEMS

Ghana: *Development of the leprosy service.*—(a) The delegate of Ghana at the 11th World Health Assembly told of the development of the leprosy service in his country since a full-time leprologist was first appointed in 1947. Previously the patients in the three main settlements had been looked after by district medical officers on a part-time basis. Sulfones became available late in 1948, but it was not until the introduction of DDS that real expansion could be undertaken. "Special auxiliaries of the leprosy service toured the country holding clinics in the small villages. Two years ago, with the help of WHO and UNICEF, a landrover service was introduced, making it possible to carry treatment into remote areas. The attendance at such travelling clinics is 80-95%, compared with a maximum of about 70% at static clinics. It is estimated that there are some 50,000 persons suffering from leprosy in Ghana, and so far 32,000 have been treated. During 1957, 2,519 patients were issued with discharge certificates."

(b) Dr. Alasdair McKelvie, recently retired from his position in charge of the leprosy service in Ghana, is reported by the *Star* to have said, during a visit at Carville, that prior to 1947 when he set up the service it was thought that there was no real leprosy problem in the country, but that when he began work patients began seeking his aid—the first of them by night. With government support and UNICEF aid there has been set up a system of leprosy settlements and mobile teams which today comprises 600 treatment centers. In a population of 5 million, it is believed, there are some 50,000 cases; surveys showed 33,000 at the end of 1956, and 29,000 a year later. As a result of the treatment work done during the past 10 years, some 10,000 patients have been discharged as disease-arrested.

Thailand: *Story of the new antileprosy campaign.*—In 1953 WHO engaged Dr. Ramon Miquel, a young Spanish physician, to take charge of antileprosy field work in Thailand, based on outpatient treatment to be carried to the villages. An enthusiastic write-up by an Associated Press correspondent was picked up by the *Carville Star* in its July-August issue last year. Because of the interest of this activity as the only one of its kind in the Farther East, that issue of the *Star* should be looked up for a supplement, in a way, to the article by Dr. Miquel in the second issue of *THE JOURNAL* last year. A minor point of interest is that the patients prefer treatment by injection to oral medication, because the needle hurts and therefore must be more efficacious—and the more painful the better, according to an unpublished statement made by Dr. Miquel in a recent discussion.

Hong Kong: *Surgery at Hay Ling Chau.*—The Mission to Lepers arranged for Dr. William L. White, a plastic surgeon from the U.S.A., to visit the Isle of Happy Healing on his way to India where he was to consult with Dr. Paul Brand. Previous to his visit no special corrective surgery had been attempted, but during his visit (following the application of simple methods of preparing hands for surgery) 92 operations were performed in 33 operating days. It is regarded as probable that such reconstructive surgery can be continued, according to a report in *Without the Camp*.

New Guinea: *Official terminology.*—An example of the extent to which a certain trend can go is seen in the official designation of the leprosaria of the Territory of Papua and New Guinea. They are called "Hansenide Colonies," as shown in an article by Dr.

Douglas A. Russell in this issue. Incidentally, Dr. Russell was originally appointed as Specialist Medical Officer (Leprosy), but in 1958 his designation was officially changed by the public health service to Specialist Medical Officer (Hansen's Disease).

United States: *For international medical research.*—A bill introduced in the U. S. Congress in August 1958 (S. J. Res. 199) would provide for cooperation in international medical research, including the establishment of a National Institute for International Research, "in order to help mobilize the efforts of medical scientists [etc.] in the United States and abroad, for assault upon disease [etc.] through international cooperation in research, research training, and research planning." Recognizing the existence of tested means for international cooperation in health matters (WHO, PASB and UNICEF), it is held desirable to establish domestic machinery "the more efficiently to cooperate with and support the [research activities] of such international organizations." One feature would be to "encourage and support the rapid interchange of knowledge and information" concerning developments in pertinent fields. Grants and loans would be made in aid of research "in countries other than the United States." No particular disease is mentioned. We are informed by Dr. J. Ross Innes, secretary of the I.L.A., that he has received a letter from a committee of the U. S. Senate asking for suggestions, which he supplied.

Research grants.—(1) It is reported that the U.S.P.H. Service has made a grant of \$34,909 to Dr. Rudolph J. Muelling, Jr., of the Louisiana State University School of Medicine, New Orleans, for a period of two years for the study of the serum protein patterns in leprosy. The work is said to involve cooperation with leprosy centers in El Salvador, Guatemala, Mexico, Costa Rica, Colombia and the Philippines, as well as the Carville leprosarium. (2) A grant of \$87,475 has been made to Drs. Erie Nelson and M. John Pickett, of the University of California at Los Angeles, for a study of the mechanism whereby cells destroy bacteria, including those of tuberculosis and leprosy. This is described as a type of immunity different from that associated with circulating antibodies but which, like the production of antibodies, can be enhanced by immunization with appropriate dead bacteria.

Reorganization at Carville.—Dr. Edgar B. Johnwick, medical officer in charge, has announced that, primarily to make the organization of the clinical section less unwieldy than it has been, a new "line" organization of the federal leprosarium has been established. This consists of four branches each headed by a physician and each comprising several sections, as follows: (1) clinical branch, with seven sections: medical, dental, nursing, pharmacy, dietetics, medical records, and medical library; (2) laboratory branch, with five sections: pathology, microbiology, chemistry, accessory, and animal house; (3) rehabilitation branch, with the chaplains and seven sections: physical therapy, occupational therapy, manual arts therapy, music therapy, health education, social service, and special services, the last subdivided into school, recreation and patient enterprises; and (4) epidemiology branch. Not listed primarily is the administrative branch, with sanitation and five sections: personnel, financial management, buildings and grounds, supply, and housekeeping. Not yet available as planned but being developed are (a) a rehabilitation service, (b) an adequate pathology service, (c) a psychiatry service, and (d) an epidemiology facility.

Tokyo Congress edition of the Star.—Congratulations are in order to the Carville Star for its enterprise in having gotten air-dispatched copies of its September-October 1958 issue, the Tokyo Congress edition, on display at the congress hall at the time of the meeting. Its front cover has, besides a central picture of the Sankei International Conference Hall (arranged for a meeting of another kind than the leprosy congress), shots of Drs. Kitamura and Hamano of the active Organizing Committee and Dr. Mitsuda its honorary chairman. Intermingled with these pictures are several small pen sketches of Japanese origin. Included in the announcements is one of the WHO Inter-Regional Conference which was held immediately after the Congress. With that

issue, it was announced, the *Star* reached the age of 18. It began as a mimeographed product of only a few hundred copies, but now it sends its 10,000 copies around the world.

Colombia: *First National Congress of Leprology.*—Under this designation there was held a meeting in Cartagena on May 20-27, 1958. Dr. Nelson de Souza Campos, technical adviser from WHO, was a member of the organizing committee, from the list of which it is learned that Dr. Luis Plata Guarnizo is the present chief of the Leprosy Section of the public health department. One of the resolutions adopted, as reported to the *Revista brasileira de Leprologia*, concerns a proposal of the Liga Antituberculosa Colombiana to establish a BCG laboratory, the interest being that there should be produced enough vaccine for the antileprosy campaign as well as the one against tuberculosis. Another is a recommendation that the Federico Lleras-Acosta Institute for Leprosy Investigations should be reactivated. (This last note would seem to confirm a long-held impression that that institution had ceased to function.)

General: *Ciba's report on the Tokyo Congress.*—Early in January, about seven weeks after the meeting ended, this office received by air mail from Basle, Switzerland, a report on the Tokyo Congress put out by Ciba, Ltd., such as was not seen after any previous leprosy congress. This 24-page pamphlet gives, in summary fashion and usually with fair accuracy, the highlights of the technical sessions. The detailed notes which Dr. J. Ross Innes wrote up at every session had been made available to him (and to us, for another) in mimeographed form through the cooperation of Mr. Charles Maenamara, Ciba's representative in Japan, and those notes were utilized in preparing their report.

WHO: *Eleventh World Health Assembly.*—The July-August 1958 issue of the *WHO Chronicle*, which is devoted largely to the Minneapolis meeting, tells of discussions of the Director-General's report in which delegates described progress made in their particular countries. Regarding leprosy, the WHO regional director for Africa stated that in the region as a whole there were estimated to be 2,000,000 cases. "Almost one million of them were receiving regular treatment already and it seemed likely that in the near future all leprosy cases in the Region would be under regular treatment." (Statements by the delegates of Ghana and the Philippines are mentioned. The gist of the former statement appears under the name of that country in this issue.)

PERSONALS

SARDAR BAHADUR BALWANT SINGH PURI, who was the honorary secretary of the Hind Kusht Nivaran Sangh and of its predecessor the Indian Council of the BELRA from its inception, retired from that position when he retired as general secretary of the Indian Red Cross Society on June 30, 1958.

DR. IAN I. COCHRANE is one of three doctors who have recently joined the missionary staff of the Mission to Lepers. He and his wife have been assigned to the Purulia Leprosy Hospital, in West Bengal, where his father—Dr. Robert G. Cochrane—began leprosy work more than thirty years ago.

DR. GEORGE L. FITE, formerly stationed at the Kalihi and Carville leprosy hospitals but more recently at the National Institutes of Health near Washington, D. C., was transferred back to Carville last July to reorganize and develop the laboratory branch.

DR. JESÚS GONZÁLEZ URUEÑA, of Mexico City, author of a book *La Lepra en Mexico* (1941) and many articles on leprosy, who retired from the position of professor of dermatology of the National University School of Medicine in 1928, died in September 1957, aged 89 years.

LIEUT. COL. C. K. LAKSHMANAN, former director general of Health Services, Government of India, became general secretary of the Indian Red Cross Society and honorary secretary of the Hind Kusht Nivaran Sangh on July 1, 1958.

DR. BERNARD MOISER, formerly of the leprosy services of Northern Nigeria and then of Southern Rhodesia, now 78 years of age and retired in England—but apparently as convinced as ever that leprosy is not contagious but is transmitted by cockroaches—contributed an autobiographic note in the November-December 1958 issue of *Carville Star*.

DR. RENATO PACHECO BROGA took over, as from the first of 1958, the editorship of the *Revista brasileira de Leprologia*, in place of Dr. Nelson de Souza Campos who had gone to Colombia as a technical adviser for WHO.

DR. LAURO DE SOUZA LIMA, a "leprologist without a country," has recently visited El Salvador on a mission for WHO, after which he was to proceed to certain other countries and, later in the year, to retire definitively in São Paulo.

I.C.A. HELPS THE CAUSE

The International Cooperation Administration of the U.S.A. has signed a contract with the Leonard Wood Memorial under the terms of which the I.C.A. will pay for approximately 300 copies of each issue of the INTERNATIONAL JOURNAL OF LEPROSY to be sent by the Memorial to addresses in Africa which are approved by the health authority of the country concerned and the I.C.A. *Leprosy Briefs* will also be sent to these addresses by the Memorial. The list is subject to annual revision, and the contract to cancellation by I.C.A. upon 30 days notice, but it is expected that it will be kept in force for three years.

The signing of this contract is an act of faith in the essential role of the educative process in the control of leprosy, and in the JOURNAL as a vehicle of educational material. On the financial side, it will help substantially in reducing the gap between present receipts and costs of publication. It is hoped that each of those who receives the JOURNAL under this arrangement will do two things: (1) after reading the JOURNAL pass it along to other interested persons, and (2) join the International Leprosy Association as soon as possible, and receive his own copy, by sending \$10.00 to the Business Manager, International Journal of Leprosy, 1832 M Street, N.W., Washington 6, D. C., U.S.A.

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