

## CURRENT LITERATURE

*To take due notice of the current literature of leprosy is one of the most important objectives of the JOURNAL. For the benefit of readers to whom medical libraries are not readily accessible it is intended that, so far as possible, abstracts of the more important articles shall be sufficiently full and complete to afford a clear understanding of them, rather than merely of the nature of their content.*

*The Contributing Editors are depended upon primarily to provide these abstracts. However, since authors' abstracts are generally to be preferred to those prepared by others, readers are invited to submit abstracts of recent papers or reports written by them which have been published elsewhere.*

V PINETTI, P. [Alterations in the glands of internal secretion in leprosy.] Giorn. Italiano Derm. e Sif. 6 (1934).

The author examined the glands of internal secretion in 12 bodies at the Cagliari leprosarium (6 males and 6 females; 5 cases of nodular, 1 of anesthetic, and 6 of mixed leprosy), and relates somatic and functional variations derived from clinical records which may be compared with the pathological alterations observed. The thyroid was examined histologically 12 times, the suprarenals 11, the testicles 6, the ovaries 6, the hypophysis 6, the pancreas 4, and the epiphysis 2 times. Macroscopically, the glands examined were usually but slightly changed; only in the testes, ovaries, and in a few cases the thyroid was there decrease in size and increase in consistence. The microscopic changes differed in the various cases. The principal abnormality was sclerosis, and in the testes this was associated with granulomatous infiltration, not observed in any of the other organs. The sclerosis appeared, as a rule, to result from a general toxic effect rather than from a generalization of granulomatous changes. Particularly frequent were vascular lesions manifested by proliferation of the media and intima, in some cases in relation with slight perivascular connective-tissue changes. The thyroid was reduced in volume in half the cases. The connective-tissue increase varied from mere traces in the interalveolar septa to large sclerotic nodules displacing the parenchyma. The alveoli were of various sizes, the colloidal content usually abundant, the epithelium generally flattened. The suprarenals, often atrophic, showed in all cases more or less marked degenerative phenomena affecting the cortical strata, with diffused or focal compensatory hypertrophic changes. The pancreas in all cases was well preserved, showing slight connective-tissue increase; the abundance of Langerhans islands, with many differentiated cells, was of particular interest; infiltrative granulomatous phenomena were entirely lacking. In the hypophysis more or less severe degenerative changes were found in half the cases; in the

others there was a prevalence of eosinophil cells. In one case this organ was increased in volume owing to an adenomatous nodule composed of basophil cells. The epiphysis was practically normal in all cases. The testes were constantly reduced in volume, with marked sclerosis which obliterated the ducts. The intertubular tissue showed fibroblastic proliferation and a more or less marked granulomatous infiltration, chiefly of lymphocytes and plasma cells. The seminal and interstitial cells were either markedly degenerated or had totally disappeared. The ovaries are also constantly diminished in size and sclerotic, but no infiltrations were found. The most striking phenomenon was fibrosis of the outer two-thirds of the gland; the follicles had almost disappeared and were atrophic. Clinically one can observe evidence of a complex pluri-glandular dysfunction, the most striking being a sexual hypofunction, with frequent gynecomastia, indicated by somatic characters and by dystrophic, cutaneous and pilar phenomena. —A. SERRA.

- ✓ PINETTI, P. [Clinical and pathologico-anatomical considerations on a case of gynecomastia in a leper.] *Rev. Sud Americana de Endocr.* (1934) No. 6.

The author describes a case of gynecomastia in a patient with mixed leprosy who died from cardiac insufficiency. Clinically there was endocrine dysfunction, particularly of the hypophysis and testis. The histological examination gave evidence of basophiladenoma of the hypophysis, hyperplasia of the suprarenal glands and hypophysis, and marked atrophy of the testis. After discussing several pathogenetic theories, the author concludes that the injuries to testis and hypophysis are to be considered only secondary factors. The primary cause would be rather an individual hetero-sexual potentiality. —A. SERRA.

- ✓ PINETTI, P. [Cagliari's new leprosarium, and a general statement on leprosy in Sardinia during 1932.] *Cagliaria Tipografia Ledda*, 1932.

After giving the history of the leprosaria in Sardinia, the author describes the new one established at Cagliari, which has a capacity of 30 patients and is furnished with the most modern appliances. He also gives interesting data regarding the frequency of the disease in Sardinia from 1896 to date. The history of the disease in Sardinia is given in tables and graphic charts. He gives statistical data of actual cases, which amount to 29, and of the foci, which are reduced to 11, and then tells of the very good results which have been obtained with Serra's vaccine. The work is illustrated by many photographs and graphic demonstrations. —A. SERRA.

- ✓ PINETTI, P. [The study of the blood in leprosy.] *Giorn. Italiano di Dermat. e Sifil.* 5 (1931).

Based on findings in 31 cases of leprosy in Sardinia (8 nodular, 6 anesthetic, 9 mixed and 4 incipient) the author concludes that the hematological changes do not afford any diagnostically useful feature. A slight anemia is present. The leucocytic formula is very variable, and the Arneth scheme is often shifted to the right. The proportion of the blood elements are often altered more than in any other disease. The author came to this conclusion by regular periodical observations of the blood on the same subjects during two year's time. Eosino-

philia was seldom observed in these cases. The blood groups ranged normally, and it was not possible to find any relation between them and the clinical form of the disease. —A. SERRA.

- ✓ PINETTI, P. [The Meinicke test with colored antigen in syphilis, leprosy, tuberculosis and the neoplasms.] *Diag. e tec. di Lab.* (1930) July.

After reporting results obtained in cases of syphilis and tuberculosis, the author considers the positive reactions obtained in 20 cases of leprosy (9 cases of nodular leprosy, 6 anesthetic, 3 mixed, and 2 incipient). He found that sera from the same patient at different times gave very different results, without any apparent cause. The M.T.R.C. was positive in 25 per cent of the observations; 25 per cent in accordance with the M.T.R., and 25 per cent in accordance with the W.R. The author suggests that probably the anticomplementary phenomena, often observed by others but never by himself, may be due to treatment with chaulmoogra oil. He maintains that both the M.T.R.C. and M.T.R. are positive in leprosy in a greater proportion of cases than the W.R.

—A. SERRA.

- ✓ VITTORIO, D. [Fosfocrisolo in leprosy therapy.] Communication to the First (Cagliari) Regional Congress, Sardo. Cagliari, 1934, May.

The author treated 14 cases with the "fosfocrisolo" mixture of the Istituto Chemioterapico Italiano; three of them had the nodular form, six were anesthetic, and five were mixed. The mixture had no effect either on the nodules or on the bacillary forms, but the ulcerated nodules and the trophic ulcerations were influenced by the treatment, healing in a shorter time than usual. No local or general reaction was ever noticed, even when the mixture had been used for a long time and in large quantities. He believes that the mixture, though having no specific action on Hansen's bacillus, is a therapeutic agent that should not be overlooked in cases with active ulcerations and in those presenting conditions of advanced organic decay. —A. SERRA.

- VITTORIO, D. [The diagnostic value of certain laboratory examinations.] *Giorn. Mal. Esot. e Trop.* (1935) Jan.

The author gives results of laboratory studies on the diagnosis of leprosy, made on 138 patients with various forms of the disease. The most important of these were examinations of the lepromatous juice, the nasal mucus (either spontaneous or produced by potassium iodide), and material from the lymph nodes. He denies any diagnostic value in puncture of the earlobes since the finding of the bacillus is only occasional and due to the presence of lepromatous infiltration of the hypoderm. —A. SERRA.

- ✓ CHIVELLONI, G. [Observation on the velocity of sedimentation of the red corpuscles in leprosy.] *Dermosifil.* (1935).

The author studied the red-cell sedimentation (Linzenmeier method) in 24 lepers (2 nodular cases, 13 anesthetic, 6 mixed and 3 incipient), and found acceleration very frequent (79.2 per cent), most marked in the nodular forms. No relation to the duration of the disease was observed, or to the results of the serological tests applied (Wassermann and Meineke). Sedimentation is

delayed as a result of treatment (gold salts and chaulmoogra oil) and hastened by intercurrent phenomena either of the disease or complicating it. He believes that the sedimentation rate is not of certain diagnostic value in leprosy, but it can be used as a subsidiary and complementary test, together with other diagnostic methods of greater value. Moreover, it can be utilized in connection with prognosis and as an indicator of the efficacy of the treatment. The administration of potassium iodide is of no advantage in connection with this test.

—A. SERRA.

WAYSON, N. E. [Early changes in children of leprosy parents.] Annual Report for 1934, U. S. Leprosy Investigation Station, Honolulu. (Unpublished.)

In a recent issue of *Science* appeared a note on the result of studies that have been made at Honolulu on young children of leprosy parents. By the courtesy of the office of the Surgeon-General, United States Public Health Service, the following quotation is made:

It has been concluded from detailed and critical examinations of a group of children of leprosy parents over a period of several years that one may detect minor but definite clinical evidence of pathological changes in the peripheral nerves and in the blood capillary system well in advance of confirmatory clinical and microscopical manifestations of leprosy. It has also been observed that both recession or arrest of suggestive neurological changes may occur without the development of the findings accepted as characteristic of the disease. This observation is a further contribution to the belief that individuals may be infected with leprosy without developing the disease.

—H. W. W.

NICOLLS, L. A study of vitamine-A deficiency in Ceylon with special reference to the statistical incidence of phrynoderma and "sore mouth." *Indian Med. Gaz.* 69 (1934) 241.

A condition that may be of interest in connection with the intensive search for the earliest evidences of leprosy infection, especially in children, is described by the author, who has paid particular attention to skin changes that indicate vitamine-A deficiency, the effects of which have been summarized as due to a generalized disturbance of the metabolism of epithelial tissues. He has described a condition which he calls "phrynoderma" (toad skin), a papular eruption due to blocking of the ducts and enlargement of the sebaceous glands (comparable with changes in the salivary glands of experimental rats), sometimes accompanied by dryness and scaliness of the skin. It may occur on any part of the body, with certain areas of predilection, and varies widely in degree and extent. Inmates of many institutions have been examined, including 234 males in a leper asylum, only 1 of whom was markedly affected, 4 others slightly. The place being overcrowded, with 678 patients and only 505 beds, it was concluded that overcrowding had no relation to the condition.

—H. W. W.

SHEN, T. H. The lipine contents of mycobacteria and their resistance against chemical disinfectants. *Jour. Shanghai Sci. Inst.* 1 (1934) 157-175.

Chemical analyses and bactericidal tests led to the following findings: 1. When *Myc. phlei* and *Myc. avium* were grown in a 5 per cent glycerol medium, the yield of the total lipins of the former was 25.74 per cent of the dry weight, that of the latter 16.51 percent. On the other hand, when they were grown in media devoid of glycerol, the former yielded only 15.69 per cent and the

latter 11.28 per cent. 2. When the "fat" and "lean" bacilli were exposed to various chemical disinfectants, the majority of the tests showed that the "lean" were more easily killed than the "fat," with the exception of two instances in which both were killed simultaneously. In view of the findings it is concluded that the fatty capsule increases the resistance of the bacilli to chemical agents. —H. W. W.

- ✓ IMURA, K. On the influence of the ethereal oils upon the culture of tubercle bacilli and upon the development of experimental tuberculosis in animals. Jour. Shanghai Sci. Inst. 1 (1934) 127-155.

As a result of bacteriological and animal experimentation, using a human strain of the tubercle bacillus, the author has arrived at conclusions which are of interest to those concerned with acid-fast organisms in general. 1. Various kinds of ethereal oils, emulsified in 5 per cent gum arabic solution, show a bactericidal effect on the tubercle bacillus. 2. The bactericidal action of the aromatic series of ethereal oils depends generally upon the existence of double-bonded carbon atoms in the side chain, or OH-, CO- and CHO- radicals. In the case of aliphatic chemicals the action depends upon the existence of double bonds and upon the number of them. In experiments designed to compare the bactericidal actions of optically isomeric substances, viz., r- and l-limonene and r- and l-pinene, the r- forms always showed stronger effects than the l- forms. 3. Tuberculous changes in animals treated by repeated injections of r-limonene were milder than those in control animals, but the changes in animals treated by l-limonene and l- and r-pinene did not differ considerably from that of control animals. —H. W. W.

- ✓ TOMIKAWA, R. Ueber die tuberculoide Lepra. [On tuberculoid leprosy.] Hifu-to-Hitsunyo 2 (1934) June. (In Japanese, with summary in German.)

After recalling that Jadassohn in 1898 gave the name "tuberculoid leprosy" to a special form of the disease, the author recounts having cultivated an acid-fast organism which was found by animal inoculation to be the tubercle bacillus from a leprous macule with a sharp border and dark, somewhat elevated margin that histologically showed tuberculosis-like foci. Guinea-pigs injected intraperitoneally with an emulsion of this bacillus died in 17 to 19 days and the bacilli were found in large numbers in the liver, spleen and pancreas. Both gross and histological descriptions of the lesions are, so far as they go, typical of the tuberculoid condition. No bacilli were found in smears or in 60 sections examined. The author concludes that the tubercle bacillus had entered the leprous macule, producing a "tuberculous leprosy macule."—[H. W. W. from translation by Dr. A. Santos of author's summary.]

- CAWSTON, F. G. Locust oil as a therapeutic agency. Jour. Trop. Med. and Hyg. 37 (1934) 49.

The author suggests that the oil extracted from locusts, which insects are used by some peoples of Africa to supplement an almost exclusive corn diet, may perhaps be of use for other purposes than softening harness; it may be of therapeutic value in tuberculosis and leprosy and may serve as a natural



balance in regions where conditions, especially vitamine deficiency, favor the development of those diseases.

[In a recent account in a South American newspaper, occasioned by a report from Russia that locust oil could be used for lubrication and in making soap and glycerine, it is stated that in the Middle Ages powdered locusts mixed with the blood of male goats was used as a sovereign remedy for leprosy.]

—H. W. W.

✓ SUCH SANCHEZ, M. Intentos de cultivo del B. de Hansen. [Attempts to cultivate the leprosy bacillus.] Madrid, Dir. gen. Sanidad, 1933, pp. 10.

Once using the nasal mucus of a patient, and 3 times employing lepromas, the author has obtained cultures of an acid-fast germ resembling the Hansen bacillus. The culture medium used was a mixture of equal parts of whole egg, placenta bouillon, and orange juice; this was neutralized to pH 7.2 and sterilized by heating for a quarter hour in steam at 75 to 80°C. on three successive days. The growth was luxuriant, in the form of isolated nodular colonies. The organism was not pathogenic for any of the laboratory animals tested (guinea-pig, rabbit, white rat and monkey) by any manner of inoculation.—[From abstract in *Bull. Inst. Pasteur* 32 (1934) 716.]

SCHLOSSMANN, K. Die Kultivierung des Lepraerregers. II. [Cultivation of the leprosy organism.] *Centralbl. f. Bakt.*, I. 127 (1933) 369.

Renewing his attempts to cultivate the Hansen bacillus (first reported in the *Centralblatt*, vol. 115) Schlossmann has concluded that it is 'only exceptionally that one obtains transferable growths on artificial media and that the positive results obtained should be attributed to traces of substances in the media that came from the human organism. The colonies developed in 2 months, sometimes 4 to 6 months. Very abundant in the first generation, the bacilli became more and more scarce in the succeeding ones. In accordance with Eichbaum, the author thinks that there was definite multiplication of the bacilli in the first two generations and perhaps even in the third.—[From abstract in *Bull. Inst. Pasteur* 32 (1934) 715.]

GERBINIS, P. Essais de culture du bacille de Stefansky. [Attempted cultivation of the Stefansky bacillus.] *Bull. Soc. Path. exot.* 26 (1933) 1135.

Using the method of Loewenstein, and the technic of Ota and Sato, the author, contrary to the experience of Asami, did not obtain a culture of the bacillus of rat leprosy, either from the heart's blood, or from the leproma, or from the pus of an abscess rich in bacilli.—[From abstract in *Bull. Inst. Pasteur* 32 (1934) 716.]

✓ REENSTIERN, J. Premiers résultats de traitement de la lèpre par un sérum expérimental. [Treatment by an experimental serum.] *Compt. rend. Acad. Sci.* 197 (1933) 718; *Arch. Inst. Pasteur Tunis* 22 (1933) 361.

Sheep were injected with the Kedrowsky bacillus and with one isolated by the author in 1912 from a leprous patient. The serum obtained was used to inoculate two patients with nodular leprosy in an advanced stage of the disease. Each of them received 3 intragluteal injections of 10 cc. of the serum. The first results seemed to be very favorable.—[From abstract in *Bull. Inst. Pasteur* 32 (1934) 729.]

MARTINEZ, R. AND ALVAREZ, F. Procedimiento rapido y sencillo para el diagnostico bacteriologica de la lepra. [Rapid and simple method for the bacteriologic diagnosis of leprosy.] *Rev. Med. Sevilla* (1933) May.

The method described involves puncturing the center of a suspected skin lesion with a fine needle and injecting 0.5 cc. of saline solution. The needle is withdrawn and the region gently massaged for one or two minutes. A second puncture permits the withdrawal of a drop of fluid which contains the bacilli. When the skin lesion is hard and sclerous it is of advantage to use distilled water instead of saline; this produces better plasmolysis of the tissues.—[From abstract in *Bull. Inst. Pasteur* 32 (1934) 716.]

DE GRAAF, F. H. AND LEVIE, L. H. Het voorkomen van zuurvaste bacterien in het bloed bij leprapatienten. [Acid-fast bacteria in the blood of leprosy patients.] *Nederlandsch Tijdschr. v. Geneesk.* 27 (1933) 395.

The authors have demonstrated characteristic Hansen's bacilli (intracellular, in globi, with zooglea) in the blood of lepers taken from the skin at a place not presenting any lesion, and directly from the vein. The examination was made in thick drops, dehemoglobinized, fixed in methyl alcohol, stained by Ziehl, and decolorized with 1 per cent sulphuric acid in 70 per cent alcohol. They believe that there is always a bacillemia in leprosy.—[From abstract in *Bull. Inst. Pasteur* 32 (1934) 718.]

SARDJITO AND SITANALA, J. Een verdere studie over leprabacillen in den dikken bloeddruuppel genomen van normaal uitziende huid van leprozen. [A further study of leprosy bacilli in the thick blood drop from apparently normal skin in lepers.] *Geneesk. Tijdschr. v. Nederlandsch-Indië* 74 (1934) 91-102.

Acid-fast bacilli have now been demonstrated by many observers in thick blood drops taken from the unaffected skin in nodular leprosy. It has further been shown that many more bacilli are present in the blood-drop film than in the serum, when the latter is obtained by a prick of the margin of the ear after rendering it anemic by clamping with a forceps, and the former after relaxing the clamp. Special importance is attached to the presence of the large numbers of bacilli in the blood drop, for it is taken to indicate that the bacilli are circulating in the blood and are present in blood capillaries before they secondarily invade the tissues to give rise to lepromata. This is why a serum film from apparently sound skin shows fewer bacilli than the blood from the same part; the bacilli are in capillaries, not in the tissue fluid. The same thing is sometimes found in nerve leprosy, although not to the degree that obtains in nodular leprosy.—[From abstract by W. F. Harvey, in *Trop. Dis. Bull.* 31 (1934) 550.]

LAMPE, P. H. J. Heeft lepra neiging tot spontane stilstand in haar ontwikkeling zonder blijvend defect? [Has leprosy a tendency to spontaneous arrest?] *Geneesk. Tijdschr. v. Nederlandsch-Indië* 72 (1932) 946.

From epidemiological studies made in Dutch Guiana the author concludes that in many instances leprosy, evidenced by definite early symptoms, fails to

progress in children and young adults, and may even regress.—[From abstract in *Bull. Inst. Pasteur* 32 (1934) 727.]

LAMPE, P. H. J. Voordrachten over de endemiologie der lepra. I. [Lectures on the endemiology of leprosy. I.] *Geneesk. Tijdschr. v. Nederlandsch-Indië* 74 (1934) 332-338. (Summary in English.)

Leprosy in a historical and therefore endemiological sense is very old. Views of its endemiology have changed from time to time, and certain important events or discoveries serve to mark off the periods of these changes. The first period extends from the beginnings of history up to 1850, and may be described as a time of confusion with other diseases and of a popular belief in its infectivity. During this time it was confused with filariasis, syphilis, yaws, and skin affections such as the ringworms. During the second period, 1850 to 1875, which was dominated by the work of Danielssen and Boeck, the doctrine of hereditary transmission was in vogue, and was subscribed to by a British commission in 1862. One of the main arguments against the view of the infectivity was the absence of conjugal transmission, and the observation that the majority of sufferers (averaging 70 per cent) were to be found in leper families. However, the infectivity theory still found expression in this period. The third period, 1875 to 1900, was one of important and definite change. In 1871 Hansen discovered the leprosy bacillus, 10 years before the discovery of the tubercle bacillus by Koch, and in 1875 a second British commission declared unanimously for the infectivity of leprosy. This was also the pronouncement of the first international leprosy conference held in Berlin in 1897. The fourth period, 1900 to 1930, saw the theory of infectivity generally adopted, an increase of studies of treatment, and the holding of conferences on leprosy. Emphasis was given the idea that to the extent that individual cure is difficult of attainment, prevention is correspondingly worth while. In a short fifth period, commencing in the previous period and extending to the present day, there has been renewal of the study of endemiology, a study of the factors concerned in active transmission and of "the conditions which produce the disposition to development of manifest leprosy."—[From abstract by L. R., in *Trop. Dis. Bull.* 31 (1934) 543.]

LAMPE, P. H. J. Voordrachten over de endemiologie der lepra. II. [The endemiology of leprosy. II.] *Geneesk. Tijdschr. v. Nederlandsch-Indië* 74 (1934) 415-422. (Summary in English.)

In this lecture the author discusses the differences of opinion regarding the virus of leprosy, and whether the acid-fast bacillus or an ultravirus or granule phase is the infective agent, but he does not come to any conclusion.—[Abstract by L. R., from *Trop. Dis. Bull.* 31 (1934) 544.]

DE JONG, R. Over tropho-neurotische atrophie in beenderen. [Neurotrophic atrophy of bones in leprosy.] *Nederlandsch Tijdschr. v. Geneesk.* 78 (1934) 1720-1727. (Summary in French.)

A description is given of a chronic case of nerve leprosy with extensive atrophy of the bones of the feet and hands, with illustrations of the gross and microscopic changes. The author considers the lesions to be due to a neurotrophic atrophy due to the action of inflammatory changes in the peripheral nerves.—[From abstract by L. R., in *Trop. Dis. Bull.* 31 (1934) 550.]



ISAWARIAH, V. and NAIR, V. G. Observations on erythrocyte sedimentation with special reference to leprosy. *Jour. Indian Med. Assoc.* 3 (1934) 231-235.

The authors have studied the red-cell sedimentation rate in the citrated blood of lepers and disagree with the conclusions of Muir and others, for they found the rate did not give a reliable indication for treatment, and that cases with high rates did well with regular hydnicarbate treatment.—[From abstract by L. R., in *Trop. Dis. Bull.* 31 (1934) 551.]

SMART, A. G. H. The state control of leprosy. *Malayan Med. Jour.* 8 (1933) 211-218.

The author first gives a historical account of legislation in Malaya for the control of leprosy, pointing out that until recently segregated lepers could only be released on a medical officer's certificate, rarely given, that the patient was "cured." He next discusses antileprosy measures in other countries, some of which have adopted the more modern methods of control. In Malaya there are over 3,000 lepers undergoing institutional treatment. A death rate that up to 1911 was 26 to 30 per cent has been reduced to 8.4 per cent, and with improved conditions and treatment there has been an increase in the numbers of cases reported. Since 1929 the policy of attracting lepers to come early, with treatment at special clinics without being arrested and confined, has been approved in the Federated Malay States, and discharges of uninfected cases have commenced. A Discharged Leper's Aid Society is advocated for them. Children born to lepers are removed from their parents within 14 days, and no case of leprosy is known to have occurred among them. He concludes that the good will and confidence of the lepers is being won by these modern methods, and "the amazing change that has come about in the care of lepers makes us optimistic for the future."—[From abstract by L. R., in the *Trop. Dis. Bull.* 31 (1934) 541.]

RYRIE, G. A. Some difficulties in leprosy. *Malayan Med. Jour.* 8 (1933) 238-243.

This paper contains general information on the diagnosis, prognosis and treatment of the disease. The author regards the adoption of the intradermal injection of ethyl esters as the most important recent advance. He rightly regards leprophobia as more infectious and harmful than leprosy itself, since it leads to the hiding of cases.—[From abstract by L. R., in *Trop. Dis. Bull.* 31 (1934) 542.]

REITZ, H. The percutaneous treatment of leprosy. *Jour. Philippine Islands Med. Assoc.* 13 (1933) 511-527.

The author claims good results "with a substance of suitable character" based on the principle that it should be soluble in the cholesterolic fats of the skin and consequently absorbed on being rubbed (by the patient) into the skin lesions. Nothing is said of the actual preparation used.—[From abstract by L. R., in *Trop. Dis. Bull.* 31 (1934) 549.]

ARISUMI, S. On the blood picture of lepers. *Taiwan Igakkai Zasshi (Jour. Med. Assoc. Formosa)* 32 (1933) 1549. (In Japanese; English summary, supplement, p. 154.)

The red corpuscles are reduced in numbers, and a fairly high proportion of basophile-punctate and polychromatophile cells are found, together with some

anisocytosis and a few poikilocytes, but no nucleated forms. The leucocytes are always increased, especially in advanced active nodular cases, with some decrease in the lymphocytes. The eosinophiles are few, but may become increased. The hemoglobin is decreased in proportion to the activity of the cases, and the hemoglobin index is rather low.—[From abstract by L. R., in *Trop. Dis. Bull.* 31 (1934) 551.]

MINAMI, HIKICHI and HAYATA. [Serological diagnosis of leprosy.] *Hifuto-Hitsunyo* (1934) April.

The authors state that they have applied the Fuchs test to the sera from 28 cases of leprosy, finding the results positive in 22 cases. This reaction is always negative in tuberculosis and syphilis, provided leprosy is not also present. In their opinion this is the best laboratory method for the diagnosis of leprosy.—[From abstract in *Urol. and Cutan. Rev.* 38 (1934) 515.]

HERRERA, M. Reserva alcalina en la lepra. [Alkali reserve in lepers.] *Actas dermo-sifil.* 26 (1934) 535-629.

Herrera studied the alkali reserve in 74 lepers of both sexes, all adults. The average figures of the actual acid-base reaction are diminished in lepers. This confirms the advisability of administering an alkaline treatment to them. Acidosis is more intense in female lepers, in patients under the age of 35, in patients suffering from nerve leprosy or having other forms complicated by nervous symptoms, in patients presenting lepra reaction, and in untreated cases. Acidosis becomes more intense in lepers who are placed under the influence of an albumin diet, such as is generally the case in undernourished patients suffering from other diseases but not having leprosy when placed on the diet.—[From abstract in *Jour. American Med. Assoc.* 103 (1934) 77.]

CUMMINS, S. L. and WILLIAMS, E. M. Cutaneous sensitivity to acid-fast bacilli in suspension. *British Med. Jour.* 1 (1934) April 21.

This study was made as a result of a suggestion by Muir, to ascertain whether healthy adults in countries where leprosy is not endemic react to Mitsuda's leprolin in the same way as nonleprosy adults in India. Twenty-five nontuberculous male adults at the Cardiff City Mental Hospital were tested with both leprolin and a tubercle bacillus suspension. The latter was controlled by testing five adult males with chronic pulmonary tuberculosis and three children with nonpulmonary lesions. They found that the typical reaction to the tubercle-bacillus suspension resembled the typical intradermal tuberculin reaction in reaching its maximum on or about the third day, though it persisted longer and tended to late central necrosis. The typical reaction to leprolin differed from the intracutaneous tuberculin reaction in remaining negative or doubtful for some days, gradually developing to a maximum between the eighth and the fifteenth day, and lasting for from four to six weeks as a diminishing zone of inflammatory edema, often showing late central necrosis. However, six of the 25 persons tested with leprolin reacted in a manner similar to the usual response to tuberculin or the tubercle bacillus suspension, showing that they were hypersensitive to a bacillary antigen to which presumably their tissues were virgin soil, this suggesting that group sensitivity must play a definite part in reactions

to acid-fast bacillary constituents. It is of interest that in two probably nontuberculous children tested with the tubercle bacillus suspension no reaction was observed, the bacilli being disposed of without inflammatory response. The authors remark that the factors determining the responses to the heat-killed acid-fast bacillary suspensions in persons free from signs of clinically active tuberculosis call for further study, and can only be discussed as a part of the larger subject of bacterial hypersensibility.—[From abstract in *Lep. Rev.* 5 (1934) 197.]

<sup>N. M.</sup>  
✓ PAVLOV, M. The influence of climate and occupation on the eyes of lepers. *Sov. Viest. Ophth.* 4 (1934) 413.

The five Russian colonies for lepers are described. The severity and number of ocular complications are proportional to climatic severity and overwork.—[From the *American Jour. Ophth.* 17 (1934) 881.]

[UGANDA] Report of the Medical and Sanitary Department of Uganda, 1933.

It is stated that the demands for leprosy relief had become so great that it was impossible to meet them with funds available for the purpose. Though it is admitted that the colony system of treating leprosy is the most suitable for the greater part of the Protectorate, the following statement is made:

The survey carried out in 1931 revealed the great extent of the disease in various districts, and it is obvious that one of two things must happen. Either an enormously increased provision must be made in funds to deal with leprosy, or the organization for relief must be dealt with on different lines from those of the past. Difficulty has arisen in the past usually because an enthusiast, usually a Mission worker, filled with compassion for these unfortunates has commenced a leper colony and then turned to the Protectorate Government and asked for assistance.—[From the *East African Standard*, Nairobi, September 22, 1934.]