

CURRENT LITERATURE

It is intended that the current literature shall be dealt with in this department. It is a function of the Contributing Editors to provide abstracts of all articles published in their territories, but when necessary such material from other sources is used when procurable.

RINALDO, D. R., and CAPURRO, E. T. Program de lucha antileprosa en la Argentina. (The program of the fight against leprosy in Argentina.) *Rev. Argent. Leprol.* **1** (1964) 11-17.

An evaluation of the work done in pilot areas in Argentina (Tucumán, Misiones) as a consequence of the "Convenio Argentina 28," which was established between the Argentine government, WHO and UNICEF.—E. D. L. JONQUIÈRES.

TORSUEV, N. A. (Leprosy in the Ukraine before the Revolution.) Summaries of papers read at an Oblast Research and Practice Conference of the Donetsk Association of Dermatovenereologists and the Donetsk Medical Institute. Kramatorsk (1964) 46-48.

Statistical data are quoted from sources in the literature, concerning the prevalence of leprosy in those governments of Russia now forming part of the Ukrainian SSR.—N. TORSUEV.

TORSUEV, N. A. (Leprosy in Yugoslavia.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 25-29.

On the basis of data from the literature the author deals with the epidemiology of leprosy in Yugoslavia and the history of its development, and quotes the available published figures on the prevalence of the disease in that country. In his view leprosy, which was quite widespread at the end of the 19th and beginning of the 20th century in the areas now making up Yugoslavia, has still apparently not been fully eradicated.—N. TORSUEV.

TORSUEV, N. A. (Leprosy in Greece.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 30-37.

The article narrates the history of leprosy in Greece and gives statistics of registered cases and a short description of the organization of control measures. Although during recent decades morbidity from leprosy in Greece has fallen considerably, that country continues to be one of the countries of Europe in which leprosy is most prevalent.—N. TORSUEV.

KOGAN, V. R. (Material on the prevalence of leprosy in the Astrakhan endemic zone in the nineteenth century and at the beginning of the twentieth.) Learned notes of the Institute for the Study of Leprosy. **4** (9) (1964) 45-49.

According to medical records and sources in the literature in the first third of the nineteenth century there were between 200 and 300 leprosy patients in the Astrakhan government. The largest number lived in the Volga delta, but from the middle of the century onward a steadily increasing number of cases began to be recorded in villages on the left bank of the Volga. Most of the patients were Russians, mainly men in the older age-groups, engaged in the fishing industry.—N. TORSUEV.

KOGAN, V. R. (The organization of leprosy control in the Astrakhan endemic zone in the nineteenth century and at the beginning of the twentieth.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 59-65.

At the beginning of the 19th century, there was a leprosarium in the vicinity of Astrakhan, which in 1819 housed 19 patients. Many leprosy patients were accommodated

in general hospitals or treated on an outpatient basis in regimental field hospitals. The question of establishing a large leprosarium in the Astrakhan region was raised more than once in the years following 1833, but not settled. From 1848 to 1866 there was a special department for leprosy patients in a local hospital and during the whole period 207 patients were admitted. In 1896 an asylum for leprosy patients was set up in Astrakhan and maintained by charitable contributions. In 1923 it was transformed into the Astrakhan Leprosarium. A small leprosarium, maintained by private benefactors existed at Krasnyj Jar from 1901 to 1922.—N. TORSUEV.

SUBIN, V. F. (Some considerations on the mechanism of transmission of leprosy.) Learned notes of the Institute for the Study of Leprosy. **4** (9) (1964) 33-44.

In the opinion of the author leprosy is a condition in which it is impossible to equate infection with illness. The process of infection may occur on a wide scale, but the incidence of the disease will be regulated by the level of the resistance to it possessed by the population. If the campaign against leprosy is to be successful the main task now is to change the level of resistance in the required direction. This could be done by means of specific immunization of the population if it were not for the failure to culture the causative agent and the absence of an experimental animal. At the moment we have to be content with BCG vaccination. Among the non-specific measures advocated by the author is an improvement in living conditions (social prophylaxis). The control of leprosy by preventing the dissemination of the infection, i.e. by putting patients in hospitals and treating them there is extremely difficult.—N. TORSUEV.

GONZALEZ DEL CERRO, S. and LATERZA, A. M. Estudio clínico y bacteriológico de las zonas cutáneas supuestas indemnes y atacadas en enfermos lepromatosos. (Clinical and bacteriologic study of cutaneous zones supposed to be free from lesions and of attacked zones in lepromatous patients.) *Leprológia* (Buenos Aires) **8** (1963) 213-220.

Examination of 100 lepromatous patients confirmed the existence of generally non-affected and affected zones. The authors believe they have contributed original data on the topographic study of cutaneous lesions in lepromatous patients and that their data will facilitate the diagnosis of the lepromatous type of leprosy. They bring new data to elucidate the importance of cold, circulatory stasis, sun rays, and repeated trauma as agents for localization of lepromatous lesions. In 15 of the cases, with or without previous treatment, a comparative bacteriologic study of the usually clinically nonaffected and affected zones was made. The authors confirm, as the most important fact, that frequently the clinically respected zones contain bacilli.—E. D. L. JONQUIÈRES.

EVSTRATOVA, V. A. (Follow-up of patients suffering from tuberculoid leprosy.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 50-54.

Between 1948 and 1962, 493 patients suffering from tuberculoid leprosy were under the supervision of the follow-up services. Of these, 343 were being treated on an outpatient basis and 150 were kept under regular observation as having completed treatment. During that period clinical relapses occurred in 62 cases (12.5%), sometimes even after lengthy treatment with sulfone drugs. Relapses were 14 times as frequent among patients with extensive eruptions. In persons treated irregularly or inadequately relapses were 7 times as frequent as among those who had had regular and adequate treatment. There was no instance of relapse among the 187 patients with limited manifestations of the disease, no lesions of the peripheral nervous system, positive Mitsuda reaction, and negative bacterioscopic results. The author believes that after 15 years' observation (former) sufferers from tuberculoid leprosy can be taken off the books and not subjected to compulsory medical examinations.—N. TORSUEV.

FEILCHENFELD, E. Ein atypischer Fall von Lepra. (An atypical case of leprosy.) *Hautarzt* (Berlin) **15** (1964) 517-518.

The author described a patient whom he had the opportunity to observe during

the years 1941-1954. The first lesions that appeared were similar to those of "parapsoriasis Brocq en plaques disséminées," and under this diagnosis the patient was presented before the Dermatological Society of Tel Aviv. At the same time a thrombocytopenic purpura was present, and only later, when typical leprotic nodules appeared, was the diagnosis of leprosy made. The patient developed leprosy reactions and died after development of glomeronephritis in 1954. The difficulty of early diagnosis in leprosy is stressed; it simulates other dermatoses in a population where leprosy is relatively uncommon.—F. SAGHER.

HORTA, BERTHA. Reacción leprosa; aspecto clínico e histopatológico. (Leprosy reaction. Clinical and histopathologic aspect.) Thesis. Universidad Nacional Autónoma de México, México D. F. 1964.

In order to learn certain aspects of the lepra reaction in Mexico, as shown clinically, epidemiologically and histopathologically, a 5 year review (1959-1963) was made of cases in the Centro Pascua, and 15 patients who presented reactional disturbances were studied. After consideration of the diverse nosologic aspects of the lepra reaction this complication was defined as "a conjunction of cutaneous, nervous and systemic manifestations interrupting the evolution of a lepromatous case in an acute or subacute form." Other acute states that may occur in leprosy are omitted in this definition. The different etiopathogenic events invoked to explain the lepra reaction, and its symptomatology, diagnosis, prognosis, and treatment, were analyzed. The epidemiologic method should be applied in study of the lepra reaction by observation of a series of factors influencing its manifestations. Some 727 reports from 479 lepromatous cases, in 34.4% of which lepra reaction occurred, were reviewed. Consistent variations in age and sex were not found, but the acute stage appeared to be more prolonged in the male. It occurred more frequently in nodular than diffuse cases; in the former, erythema nodosum was more frequent, and, in the latter, the necrotizing type of erythema was the principal cutaneous manifestation. Leprosy reaction seemed more conspicuous and intense in the early years of the illness. It occurred under all forms of treatment, but comparatively more commonly with the sulfa drugs of prolonged action, and less frequently with DPT and much less often with DDS.—A. SAUL.

SEGURA, N. Reacción leprosa, su relación con la fragmentación del *Mycobacterium leprae*, bajo el tratamiento sulfónico. (Leprosy reaction; its relation with fragmentation of *Mycobacterium leprae* under sulfone treatment.) Professional Thesis. Universidad Nacional Autónoma de México, México, D. F., 1964.

A study was made on the basis of a concept first expressed by Ridley that development of lepra reaction is related to fragmentation of the bacillus. In order to test this concept a review was made of 429 reports of lepromatous cases under sulfone treatment in the Centro Dermatológico Pascua of Mexico City, and 10 lepromatous patients were studied. Repeated bacilloscopies were made, as well as clinical and histopathologic studies before and after the sulfone treatment and each reactional episode. Fragmentation of bacilli was noted in 73.9% of patients in lepra reaction, and not observed in 81.7% of patients who did not show acute disturbances. Sulfone treatment did not seem to be the only cause of fragmentation of bacilli; it occurred in 45.7% of patients before sulfone treatment. All of the 10 patients studied had reactional disturbances; fragmentation of bacilli was observed in 40% before the disturbances, and did not occur in 30% in spite of intense lepra reactions. The data obtained from this study did not permit firm conclusions, but it seemed that fragmentation of bacilli may occur in reactional episodes, but a cause-and-effect relation cannot be established.—A. SAUL.

MANZI, R. C., LEFEVRE, H., BARENTIN, E. A. and FERRER, J. Correlaciones entre fondo de ojo, presión arterial y urea en sangre. (Correlations among ocular fundus, arterial blood pressure and blood urea.) *Leprológia* (Buenos Aires) **8** (1963) 193-196.

Two curves of hyperazotemia and of blood pressure are seen, one for the 30-40

year age period and the other for 60 years or more. The former corresponds with leprosy damage, and the latter with senility changes.—E. D. L. JONQUIÈRES.

MERCAU, A. R., BORSANI, R. and SERIAL, A. Lesión traumática del cubital simulando neuritis hanseniana. (Traumatic lesion of the ulnar nerve simulating leprotic neuritis.) *Leprología* (Buenos Aires) **8** (1963) 201-203. Case report.—E. D. L. JONQUIÈRES.

USMANOV, R. K. (Bone conduction of sound in leprosy patients.) Summing-up Conference of Dermatovenereologists. Zdanov (1964) 56-57.

In 115 persons suffering from lepromatous leprosy the hearing was tested by means of a tuning fork and pure tone audiometry. In 60 patients speeding up of bone conduction was noted: first degree (loss of 30 decibels) in two persons; second degree (loss of 30 to 60 decibels) in 41 persons; and third degree (loss of more than 60 decibels) in 17 persons. Bone conduction for tones from 125-1000 cycles per second dropped out in 37 patients, for all tones in 15 patients and for tones from 125 to 500 and 8000 to 10,000 cycles per second in 8 persons. The shortening of the range of bone conduction occurred mainly in patients suffering from fresh leprosy but also in those suffering from relapses or exacerbations of the disease. There was considerable shortening of the range of bone conductivity in 52% of patients, and particularly among those suffering from exacerbations of the disease. This is apparently due to specific intoxication.—N. TORSUEV.

VERBINA, N. K. (The condition of motor chronaxy in leprosy patients.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 71-73.

The author studied the condition of motor chronaxy in 100 patients suffering from leprosy in various forms and stages. A lengthening in the motor chronaxy of muscles in leprosy was found not only when the peripheral nervous system was affected but also in muscles whose innervation showed no clinical signs of damage. In the absence of neurotic disturbances the lengthening of motor chronaxy in most muscles was by a factor of not more than 1.5-3.0 compared with normal. A greater change was found only in single cases. The lengthening of chronaxy is in direct proportion to the severity and duration of the neuritis. In lepromatous leprosy a lengthening of motor chronaxy in muscles whose innervation has not been affected is found in a larger number of muscles and to a greater extent than in leprosy of the tuberculoid or indeterminate types. In sufferers from lepromatous and tuberculoid leprosy during periods of regression a certain degree of normalization takes place in the chronaxy of muscles whose innervation has been clinically unaffected.—N. TORSUEV.

VERBINA, N. K. (Electromyographic studies in leprosy patients.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 74-77.

In lepromatous and tuberculoid leprosy changes in the electrical activity of muscles may take place whether neuritis is present or not. Electromyograms of muscles whose innervation system appears clinically unaffected show a reduction in the amplitude of the action potentials while the frequency is maintained. When a neuritic process is present, not only quantitative but also qualitative changes occur in the bio-electrical activity of the muscles (a lower potential frequency), which suggests that the cells of the anterior grey columns are affected. Electromyography can be used in leprology to determine the localization of and degree of damage to the motor neuron and also to determine the dynamics of changes in the neuromuscular system, particularly during the period of regression of the disease.—N. TORSUEV.

SNYTKO, V. T. (A case of infection psychosis due to an exacerbation of leprosy.) *Voprosy leprolog. i dermat.* **2** (18) (1964) 51-53.

This is a description of a case of infection psychosis with asthenia in the prepsychotic and postpsychotic periods, marked delirium at the height of the malady and a favorable course and outcome. The connection between the psychosis and leprosy is shown by the fact that the psychosis began during a severe lepra reaction and by the

absence of any favorable response to antibiotic therapy, in contrast with the positive results of antileprosy treatment combined with the administration of prednisolone.—N. TORSUEV.

MANZI, R. O., SARASINO, E., LEFEVRE, H. and BARENTHIN, E. A. Síndrome doloroso de fosa iliaca derecha en enfermos lepromatosos. (Pain syndrome of right iliac fossa in leprosy patients.) *Leprológia* (Buenos Aires) **8** (1963) 204-212.

Two cases of a painful syndrome simulating acute appendicitis are recorded. In one of them, in which operation was performed, retroperitoneal lepromatous adenitis was found. The other case was one of hepatomegaly. In cases of reactional lepromatous leprosy these two possibilities must be kept in mind in the diagnosis of appendicitis. Radiologic studies must be performed to rule out this surgical disease.—E. D. L. JONQUIÈRES.

EVSTRATOVA, V. A. (Reparative processes in the bone tissue in cases of leprosy under the influence of sulfone therapy (X-ray investigations.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 101-105.

In a group of 40 patients suffering from different types of leprosy and kept under observation for ten years, the author found that sulfone treatment prevented the development of dystrophic [degenerative (N.I.)] and destructive changes in the bones of the feet and hands and also hindered the growth of changes already present. In some patients, however, despite lengthy treatment, pathologic changes may occur in the shape of leproma formation and dystrophic processes. Sulfone treatment does not lead to the replacement of cyst-like cavities by bony tissue. When symptoms of damage to the peripheral nervous system occurred or became more intense during antileprosy treatment, the dystrophic changes in the small bones of the extremities usually spread.—N. TORSUEV.

NAZAROV, K. I. and VRAGINA, V. S. (The effect of helminth infestation on the course of leprosy.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 78-81.

On the basis of observations of the course of leprosy in 30 patients (26 with lepromatous leprosy, 3 with tuberculoid leprosy and 1 with leprosy of the indeterminate type) the authors state that helminth infection in leprosy patients during the period of antileprosy drug treatment slows up regression of the eruptions and contributes to the occurrence of exacerbations and relapses. Eosinophilic leucocytosis as an indication of helminth infection was not marked (5-10%), and was often found long before the discovery of helminths by coprologic examination. Helminth infection should be called to mind in cases of sulfone resistance.—N. TORSUEV.

GARUS, L. Z. (The functional condition of the adrenal cortex in persons suffering from leprosy.) *Voprosy leprolog. i dermat.* **2** (18) (1964) 70-75.

The functional condition of the adrenal cortex was studied in 50 leprosy patients. Function was found to be depressed in all cases. The lowest 17-ketosteroid level was found in patients suffering from chronic lepra reactions of the erythema nodosum type or from progressive lepromatous leprosy. The Thorn test was negative in almost all of these patients. In patients with marked regression the level of excretion of 17-ketosteroids was normal in most cases, and the Thorn test more often than not was positive. In carrying out antileprosy treatment account must be taken of the results of the Thorn test and the level of 17-ketosteroids in the 24-hour urine must be determined.—N. TORSUEV.

MISRA, U. K. and VENKITASUBRAMANIAN, T. A. Serum cholesterol and phospholipids in leprosy patients. *Indian J. Chest Dis.* **6** (1964) 48-51.

In leprosy significant changes from the normal are observed in total cholesterol and total phospholipids of serum. The average values of serum cholesterol and phospholipid phosphorus in leprosy are 108.60 mgm. and 5.79 mgm./100 ml. serum, as compared to the normal values of 189.75 mgm. and 7.97 mgm./100 ml. serum, respectively.—AUTHORS' SUMMARY.

ZATOLOKIN, F. D. (The dynamics of changes in the level of manganese in the blood of persons suffering from lepromatous leprosy under the effect of antileprosy treatment.) Summaries of papers read at an Oblast Research and Practice Conference of the Donetsk Association of Dermatovenereologists and the Donetsk Medical Institute. Kramatorsk (1964) 46-48.

The level of manganese in the blood was determined by spectro-chemical analysis in 143 patients suffering from lepromatous leprosy in the stage of regression. In 119 of these a clear-cut reduction in the manganese level was noted (average: 1.6 mgm. % in terms of ash), and in 24 an increase was found (average: 3.4 mgm. % in terms of ash). The mean level in the control group of healthy persons was 2.4 mgm. %. The reduction is accompanied by a disturbance of oxidative processes and an accumulation of incompletely oxidized products, which leads to a shift towards acidosis in the acid-base equilibrium. An increase in the manganese level in the blood of leprosy patients corresponds with clinical improvement in the disease.—N. TORSUEV.

ZATOLOKIN, F. D. (The effect of antileprosy treatment on the level of copper in the blood of persons suffering from lepromatous leprosy.) Summaries of papers read at an Oblast Research and Practice Conference of the Donetsk Association of Dermatovenereologists and the Donetsk Medical Institute. Kramatorsk (1964) 48-49.

The level of copper in the blood was determined by spectrochemical analysis in 143 patients suffering from lepromatous leprosy in the regression stage. In 101 patients the level was low (average 1.5 mgm. % in terms of ash) and in 42 patients it was high (average 3.8 mgm. %), while in the healthy control group the mean figure was a 2.7 mgm. %. The investigations were carried out regularly over a period of two years of antileprosy treatment. They showed that changes in the concentration of copper in the blood of persons suffering from lepromatous leprosy are stable and very slow to return to normal.—N. TORSUEV.

DAVLEKAMOVA, F. A. and ZUTIKOV, B. R. (Experience in the outpatient treatment of leprosy patients in the Mujnak Leprosy Control Center in the Karakalpak ASSR.) Learned notes of the Institute for the Study of Leprosy 4 (9) (1964) 55-58.

At the beginning of 1963, 231 patients were being treated at the Center on an outpatient basis. Three were suffering from lepromatous leprosy, 44 from tuberculoid leprosy and 46 from leprosy in the indeterminate phase. Sulfone therapy was practiced, sometimes in combination with Tibon (thiacetazone) and Ftivazide. General tonics and intracutaneous injections of moogrol were widely used. Of 93 patients who had not been in a leprosarium earlier, 5 had relapses during a period of 9 years. Of 138 who had been in a leprosarium, 20 (14.4%) had relapses.—N. TORSUEV.

BRAGINA, V. S. and TJURIN, JU. P. (Experience in the use of cycloserine in leprosy.) Summing-up Conference of Dermatovenereologists. Zdanov (1964) 63-65.

For six months the authors treated 14 persons suffering from lepromatous leprosy with cycloserine, beginning with a daily dose of 0.25 which was raised to 0.5, only one patient tolerating a dose of 0.75. (The units of measurement of dosage are omitted in the original. [N.T.]) They came to the conclusion that the preparation has a relatively slight therapeutic effect and causes frequent marked side effects (vertigo, headaches, general debility, numbing of the extremities, digital tremor, difficulties in nose-breathing, and pastiness of the face and distal parts of the limbs), which make it necessary to break off treatment. In therapeutic effect cycloserine is inferior to the sulfones.—N. TORSUEV.

LETICEVSKAJA, A. M., NAZAROV, K. I. and VRAGINA, V. S. (A comparative evaluation of the therapeutic activity in leprosy of DPT (Ciba-1906) and ethoxide.) Learned notes of the Institute for the Study of Leprosy 4 (9) (1964) 82-86.

In carrying out a comparative study of the therapeutic effectiveness of the two preparations in three groups of patients (14 cases of lepromatous leprosy, 16 of tuberculoid leprosy, and 17 of indeterminate type), the authors found that DPT brings about more rapid disappearance of the clinical manifestations of the disease, and that the process of regression is histologically more marked when it is used. In some of those suffering from the tuberculoid and indeterminate types of leprosy, the Mitsuda lepromin reaction became positive in somewhat higher degree after DPT and ethoxide treatment. Unlike DPT, ethoxide has a depressant effect on hematopoietic function, causing signs of hypochromic anemia and sometimes even leading to toxicoderma.—N. TORSUEV.

ROMERO, G. E. Tratamiento de la lepra con sulfametoxipiridazina. Primeras experiencias en Mexico. (Treatment of leprosy with sulfamethoxyipyridazine. First experience in Mexico.) Professional Thesis. Universidad Nacional Autónoma de Mexico, Mexico, D.F. 1964.

On the basis of original studies by Languillon and Schneider in the treatment of leprosy with sulfamethoxyipyridazine, and the original experience of Saúl and Vargas in Mexico, the drug was tested in 19 leprosy patients in the Centro Pascua in Mexico City. Of these patients, 18 were lepromatous and 1 tuberculoid. In 16 cases the drug was administered by mouth as follows: 500 mgm. each 24 hours in 2 cases; 250 mgm. per 24 hours in others. In one case 625 mgm. were given intramuscularly twice a week. The patients were observed for periods from 3 to 36 months; appropriate clinical, bacteriologic and histopathologic control was exercised, and biometric studies and erythrocyte sedimentation tests were made. At the end of the study it was concluded that the product is highly effective in leprosy. The tuberculoid case was cured clinically before the end of 3 months of treatment. In lepromatous cases improvement was evident within the first 3 months and clinical cure after 6 months in 7 patients. Bacteriologic negative state was achieved in 9 patients. During the treatment toxic manifestations did not occur; lepra reaction was slight and controllable except in one case, in which it was necessary to suspend drug therapy. It was concluded that with the drug tested, the treatment of leprosy could count on one more drug in its therapeutic arsenal.—A. SAUL.

WILKINSON, F. F., LEVI, S., MANZI, R. O. and FERRER, J. La sulfametoxidiazina en el tratamiento de la lepra. (Sulfamethoxydiazine in the treatment of leprosy.) *Leprológia* (Buenos Aires) **8** (1963) 228-232.

Ten lepromatous patients were treated with sulfamethoxydiazine with doses ranging from 1.5 gm. to 3 gm. a day. Good tolerance was noted in the short time of observation (only 2 cases reached 4 months of treatment).—E. D. L. JONQUIÈRES.

ELLIS, W., GATTI, J. C., CARDAMA, J. E., BALIÑA, L. M. and WILKINSON, F. F. Ensayo terapéutico con griseofulvina en lepra. (Therapeutic trial of griseofulvin in leprosy.) *Leprológia* (Buenos Aires) **8** (1963) 221-222.

Two lepromatous patients, not subjected to other previous treatment, were submitted to griseofulvin therapy. After 4 and 8 months, respectively, of this treatment some clinical improvement was noted. The histopathology and bacteriology remained the same.—E. D. L. JONQUIÈRES.

SAXENA, K. N. and MATHUR, J. S. Intra-neural Tolazoline in leprosy. *J. Indian Med. Assoc.* **42** (1964) 131-133.

Favorable results are reported on intra-neural administration of Tolazoline in two cases of ulnar nerve involvement. One patient had had anesthesia and contracture of the little and ring fingers with slight wasting of interossei, of 6 months' duration; the other had had loss of sensation in the affected part and a few reddish patches on the forearm for 4 months. The former was on antileprosy treatment. On the presumption that the neural signs and symptoms of leprosy have a close relationship with

blood circulation to the affected nerves the patients were treated with intraneural injection of Tolazoline, a vasodilator drug, 0.01 gm. twice a week. The first patient recovered completely after 20 injections. Sensation for deep touch and pinprick and color of the skin, returned to the affected part; the little finger, which was a little wasted, returned to normal. The contractures of small and ring fingers were corrected. The thickness of the ulnar nerve was reduced. In the second case, after 3-4 intraneural Tolazoline injections, the patient noted an improvement in the venous prominence of the dorsum of the hand and change in the previous atrophic color of the skin over the affected part; sensation, previously lost, improved. The authors conclude that "with intraneural Tolazoline therapy the blood supply of the nerve supplying the affected part appears to improve and thereby the lesions of leprosy also improve." — K. RAMANUJAM.

BOSE, K. S., GHOSH, S. and MUKERJEE, N. Decompression of nerves in the treatment of leprosy neuritis. *J. Indian Med. Assoc.* **42** (1964) 456-460.

The authors describe a new operative technic to "produce decompression of the involved nerves" in leprosy and promote recovery of affected nerve fibers. It consisted of exposure, after adequate preparation of skin and local infiltration anesthesia, of the thickened portion of the ulnar nerve in the arm by a longitudinal incision 3 to 6 inches long. The nerve was then incised longitudinally in 3 to 4 equidistant places along the whole length of the thickened portion, with incision of both the thickened sheath and epineurium down to the center of the nerve. Caseous material, when present, was scooped out. The sheath was left open and the skin sutured with a drain by nylon threads for 48 hours and a compression bandage applied thereafter for 3 days. Post-operatively, besides analgesics, systemic antibiotics were administered 3 to 4 days more. Prednisolone in a dose of 5 mgm. t.i.d. was administered for 3 weeks to prevent fibrosis and scarring. Antileprosy treatment was continued. Physiotherapy both before and after operation was given 3 days a week "to minimize the stiffness of the joints of the fingers and muscles." This operation was carried out on 10 cases of nonlepromatous leprosy (9 tuberculoid and 1 pure polyneuritic) showing wasting of muscles and deformity in the hand in 7 and pain and tingling along the thickened nerve in the remaining 3. Tingling pain was relieved in all cases within 1 month. Deformities improved in 5 out of 7 cases. Wasting of muscles improved with postoperative physiotherapy. Abduction and adduction movement of the finger were restored to a considerable extent in all the cases with impaired movement. The disease was arrested and there was no spread of the polyneuritic changes during a two year followup. The advantages of the operation are: It is simple; it can be done under local anesthesia in any leprosy center; it is a preventive measure in early cases; and it is free from complications.—K. RAMANUJAM.

PUPPO J. DE A. Tres casos de lepra lepromatosa tratados pela lisozima associada ao Calciferol (Vitaminas D₂ e D₃). (Three cases of lepromatous leprosy treated by association of lysozyme and Calciferol.) *Rev. brasileira Leprol.* **31** (1963) 59-65.

This preliminary study indicates the importance of prevention and early treatment of cases of lepromatous leprosy as elements in control of the disease. The author discusses the effects of associated lysozyme and Calciferol in the home treatment of lepromatous leprosy. This association has proteolytic and biostatic antimicrobial activity because the lysozyme acts on the Virchow cell membranes (Leprazellen) and has a disruptive action on *M. leprae*. The associated Calciferol, a vitamin with analgesic capacity, stimulating organic defenses, has been used since Charpy, in the treatment of cutaneous tuberculosis, a disease resembling this kind of leprosy. The practical results obtained in the three cases treated by this association demonstrate some specificity in healing the ulcerations of lepromas. Improvement was observed in patients in liberation of endotoxins which transformed anergic leprosy into an immuno-allergic reaction.—J. DE A. PUPPO.

IOFFE, JU. L. (The treatment of neuritis in leprosy by means of perineural injections of Lidase.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 93-97.

The author reports the elimination or reduction of pain and the stabilization of neuritic manifestations as a result of perineural injections of Lidase (hyaluronidase) in 20 patients suffering from exacerbations of neuritis. When begun early, the treatment makes it possible, in a number of cases, to achieve partial restoration of lost sensation. The results obtained are usually lasting and the relapses that do occur are eliminated as a rule by a second course of injections. The technic of perineural injection is simple and can be used in any leprosy control establishment.—N. TORSUEV.

NAZAROV, K. I. (Pathomorphologic changes in the eyes of leprosy patients treated with chaulmoogra-oil and sulfone preparations.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 180-184.

The author carried out histologic examinations of the eyes in autopsies on 15 leprosy patients, 12 of whom had been treated with preparations of chaulmoogra oil and 3 with sulfones. All had lepromatous leprosy. The examinations showed that treatment with chaulmoogra-oil preparations alone does not lead usually to regression of lesions in the anterior chamber of the eye and does not stop their spread. In all cases where the person concerned had suffered from leprosy sclerokerato-iritis and had been treated for many years with chaulmoogrates, numerous specific and degenerative changes were found in the anterior chamber. Sulfone treatment of persons with moderate manifestations of the disease led to a relatively swift regression of the leprosy process and forestalled damage to the organ of sight. In patients with specific lesions of the anterior chamber, sulfone treatment led to their regression, going as far as complete disappearance. However, the author found morphologic changes, although not very marked, in the tissues of the anterior chamber in the histologically and clinically unaffected eyes of persons treated with sulfones. Thus in the limbic area, the adjacent sclera, the ciliary body, and the iris, there were foci of infiltration consisting mainly of lymphocytes with occasional small clumps of homogeneous and granular leprosy bacilli. No degenerative changes were found in the tissues and their nervous apparatus.—N. TORSUEV.

BLANCO, J. F. Plásticas de cornea con fascia lata. (Plastic surgery of the cornea with fascia lata.) *Leprológia* (Buenos Aires) **8** (1963) 223-225.

Repair of the corneal ulcer that follows paralytic lagophthalmos in leprosy was tried with fascia lata. The results were good in 4 of 6 treated cases. Increase in vision was noted in those cases in which the corneal ulcer was not located in front of the pupil. Some improvement, however, was seen in these unfavorable cases, resulting from corneal rest and improvement in the chronic inflammation and infection.—E. D. L. JONQUIÈRES.

SACHERI, R. Tratamiento de la laringitis leprosa fibroestenósante. (Treatment of fibrostenosing laryngitis.) *Leprológia* (Buenos Aires) **8** (1963) 237-239.

In 2 cases of fibrostenosing lepromatous laryngitis the cicatricial adhesions were freed, enlarging the stenosed organ. Tracheotomy had to be performed previously to avoid asphyxia.—E. D. L. JONQUIÈRES.

IOFFE, JU. L. (The surgical treatment of neuritis in leprosy.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 87-92.

The author carried out 14 operations of epineuriectomy, neurolysis and transposition of nerve stems in fresh and chronic cases of neuritis in leprosy patients and states that these simple operative procedures eliminate the pain syndromes. Total removal of the nerve sheath (decapsulation), and also transposition of a considerable length of the ulnar nerve, improve the effect of the operation.—N. TORSUEV.

LOGINOV, V. K. and IOFFE, JU. L. (Amyloidosis in leprosy.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 66-70.

After studying 19 persons with lepromatous leprosy, who were suffering at the same time from amyloidosis, the authors concluded that the complication is a consequence of permanent reactional phases, trophic ulcers and osteomyelitis. They believe that perseverance and careful antileprosy therapy, combined with symptomatic treatment and proper diet may bring about a regression of the amyloid degeneration of the internal organs, as well as cut short the reactional phases and lead to regression in the main disease.—N. TORSUEV.

VDOVINA, N. A. (Carbohydrate-protein compounds and nucleic acids in regressing lepromatous leprosy [pathohistologic investigations].) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 168-179.

Young, growing lepromatous granulomas are rich in neutral mucopolysaccharides and ribonucleoproteins. The concentration of these compounds bears witness to the high degree of cellular activity connected with the processes of phagocytosis of *M. leprae*. The collagenous fibers of the derma contain an excess of carbohydrate-protein complexes, viz., acid mucopolysaccharides of the hyaluronic-acid type and to a greater degree neutral polysaccharides. In view of the destruction of mycobacteria and the accumulation of lipids in the protoplasm, the lepra cells lose ribonucleoproteins and polysaccharide-protein compounds and are transformed into lipid drops surrounded by precollagenous fibers. These, as precipitation of the precollagen phase proceeds, gradually lose their capacity to stain by the PAS-method and acquire the staining and histochemical properties of mature collagen. The process of intensive precollagenization is accompanied by the proliferation of fibroblastic cells rich in deoxyribose nucleoproteins and takes place in the presence of a huge number of mast cells. The protoplasm of these cells contains mucopolysaccharide-heparin- and PAS-positive granules resistant to amylase and hyaluronidase. The slight reduction in the PAS-reaction in the fibers in the process of formation and in the vascular walls under the influence of hyaluronidase is probably due to the presence of glycoproteins. J. Gorsh and H. Catchpole (1949) indicated the possibility of such phenomena. In patients in whom regression is complete, neutral and acid mucopolysaccharides are not always found together and when present are found only in small amount. In the skin they are preserved in the form of a narrow strip in the collagenous fibers under the epidermis and around the appendages.—N. TORSUEV.

NISHIMURA, S., KAWAGUCHI, Y., KOHSAKA, K. and MORI, T. Contamination of healthy mice with murine leprosy-like acid-fast bacillus. *La Lepro* **33** (1964) 245-256.

The subcutaneous connective tissue, lymph nodes and organs of healthy mice were examined in detail by the spread-tissue preparation and stamp-smear methods, and stained with the Ziehl-Neelsen stain. Material from bacillus-positive animals was cultivated on artificial media or inoculated into other mice, and numerous acid-fast bacilli were isolated. Lepromas were produced in mice inoculated with the isolated organisms and identification tests showed many of the organisms to have properties similar to those of the murine leprosy bacillus. The organism has been called the murine leprosy-like acid-fast bacillus, since there are several points of difference, such as the absence of active infection in the original animal, the lack of leproma production but proliferation in the lungs in the next generation of mice, and the simple conglomeration of organisms rather than their presence in the cells. The source of infection is discussed. As a result of the findings in this study, it is suggested that caution must be exercised in experiments in which mice are inoculated with the leprosy bacillus, and that acid-fast bacilli present in natural circumstances must be noted as an infectious agent of natural murine leprosy.—AUTHORS' SUMMARY.

SAVINIC, B. V. (Cardiac changes in rat leprosy.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 161-167.

Specific and nonspecific changes occur in the rat heart in cases of rat leprosy. The specific changes include granulomas resembling the paratuberculous type and mainly localized in the interstitial tissue of the myocardium. The nonspecific changes occur in the form of alterations in matrix and connective tissue and are marked by collagenization and vascular disorders together with the development of signs of increased permeability, albuminous degeneration of muscle-fibers, etc.—N. TORSUEV.

KURILOV, V. JA. (The electroencephalogram in experimental leprosy of rats.) Summing-up Conference of Dermatovenereologists. Zdanov (1964) 66-68.

The investigations carried out by the author on 7 healthy rats and 9 rats suffering from rat leprosy showed that in the sick rats there was a disorganization of the rhythm of the biologic potentials in the brain. Oscillations with a frequency of 3-4 per second were absent, excitability and lability were reduced, and there was considerable exhaustion of the cerebral processes.—N. TORSUEV.

ALAMDAROV, I. N. (Cerebral changes in experimental rat leprosy.) Learned notes of the Institute for the Study of Leprosy 4 (9) (1964) 123-128.

By introducing Stefansky's bacillus into the brain of white rats, the author brought about a general disease in the animals, with characteristic lesions of the skin and internal organs. A typical granulomatous process with a high bacillus content developed in the brain, a result which does not occur when other methods of infection are used. Under natural conditions, or when extracranial routes of infection are used, the Stefansky mycobacteria apparently do not penetrate the cerebral substance and this seems to be responsible for the absence of specific changes in the brain. In view of the affinities between *M. leprae* and *M. lepraemurium* and the similar changes they bring about in the tissues, the author considers that in human leprosy the central nervous system is not drawn into the disease process because *M. leprae* cannot overcome the blood-brain barrier.—N. TORSUEV.

RYZOVA, N. JA. (The distribution and excretion of Solusulfone administered with Ekmolin in healthy white rats and white rats suffering from rat leprosy.) Learned notes of the Institute for the Study of Leprosy 4 (9) (1964) 129-136.

When Solusulfone is administered intramuscularly in the form of a suspension in Ekmolin, it is quickly absorbed from the site of injection and the total amount in the blood, liver, kidneys and skin during the first hour reaches 25% of the dose given. The highest concentration occurs in the skin. Ekmolin ensures that the Solusulfone is maintained a longer time in the tissues and is excreted more slowly by the kidneys than when administered in an aqueous solution. Apparently Ekmolin protects the Solusulfone from change in the rat organism, as a result of which the amount of the substance excreted is higher than when it is injected in an aqueous solution.—N. TORSUEV.

KOSOLAPKINA, L. I. and SAVINIC, B. V. (Pathomorphologic changes in the internal organs of white mice infected with the rat leprosy bacillus and treated with Solusulfone.) Learned notes of the Institute for the Study of Leprosy 4 (9) (1964) 142-148.

Solusulfone treatment of white mice infected with Stefansky's bacillus in the earlier stages has a favorable effect on the course of the disease, slowing down its development. After 4 months' treatment no granulomatous lesions are found in the internal organs, lymph glands, and skin. Lymphoid cells predominate in the infiltrates and foci of collagenization occur; destruction of lepra cells is noted, with marked destructive changes in the bacilli, which turn into granular forms. Marked dystrophic changes due to Solusulfone are not found in the internal organs of the animals. Solusulfone treatment of white mice in an advanced stage of the disease produces no therapeutic effect and such animals had died by the end of the first month of treatment.—N. TORSUEV.

KOSOLAPKINA, L. I. and SAVINIC, B. V. (The effect of DPT (Ciba-1906) on healthy white mice and rats and on animals infected with rat leprosy.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 149-153.

The toxic dose of DPT (Ciba-1906) for healthy white mice is 0.1-0.2 gm., the non-toxic dose 0.02-0.05 gm. For rats the toxic dose is 0.3-0.5 gm., the non-toxic dose 0.08-0.1 gm. In the internal organs of healthy animals given toxic doses of the drug, dystrophic changes usually develop, particularly in the liver (fatty and albuminous degeneration) and in the kidneys (necrotizing nephrosis). Necrotic processes are observed in the gastric and intestinal mucosa. These findings indicate the need when treating leprosy patients with DPT (Ciba-1906) to make careful checks on the functional condition of the liver, kidneys, stomach and intestines.—N. TORSUEV.

POGORELOV, V. N. and BADOVSKAJA, Z. V. (An attempt to infect guinea-pigs with *Mycobacterium leprae*, *Mycobacterium lepraemurium* and BCG when administering cortisone.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 154-160.

Administration of cortisone to guinea-pigs does not increase their susceptibility to human and rat leprosy bacilli, but when they were infected with BCG vaccine, the infection progressed relatively more rapidly.—N. TORSUEV.

CERNYSEVA, L. M. (Pathohistologic changes at the site of injection of lepromin in guinea-pigs vaccinated with BCG.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 185-191.

In guinea-pigs BCG vaccination causes changes in the reaction of the tissues to the intradermal administration of lepromin. The changes are characterized by the development of circumscribed lesions with a marked exudative component and a clear-cut arrangement of the cellular elements into zones, and also by more rapid development of the lesions.—N. TORSUEV.

MERCLIN, G. V. and BORISOVA, S. S. (The complement fixation test in leprosy.) Summing-up Conference of Dermatovenereologists. Zdanov (1964) 61-63.

The authors carried out G. V. Merlin's active modification of the complement fixation test with the sera of 138 treated and 8 as yet untreated patients suffering from lepromatous leprosy and with 31 control sera from healthy persons. When rat lepromin was used as an antigen, positive and weakly positive reactions were found in 113 of the treated and in all the 8 untreated patients. When an antigen from BCG vaccine was used, the corresponding figures were 81 and 6, but among the healthy persons a positive result was obtained only once, with antigen from rat lepromas. In the opinion of the authors the positive reaction in the complement fixation test with sera from patients suffering from lepromatous leprosy when lepromin and BCG vaccine are used as antigens is the result of a specific reaction due to the presence in the serum of specific antibodies (detected when Mitsuda lepromin is used as an antigen) and group antimycobacterial antibodies (detected when rat lepromin and BCG vaccine are used as antigens), which appear to be based on the biologic affinities of these bacteria with the causative agent of leprosy and their possession of common antigenic properties.—N. TORSUEV.

WEBER, D., HAAS, H., ROZANSKY, R. and ZIFRONI, A. Evaluation of the tubercle phosphatide-kaolin agglutination test in tuberculosis. Acta tubere. Scandinav. **45** (1964) 118-122.

A new test detecting antiphosphatides, in which use is made of the phosphatide-kaolin antigen, was described by Takahashi. He found that the level of antiphosphatides reflected the activity of tuberculosis more accurately than other antibodies. The authors examined 488 sera. The phosphatide-kaolin agglutinins were found in 76% of sera from persons suffering from tuberculosis. The titer changed with amelioration of clinical status. Sixty sera from leprosy patients sent from the Hospital for Hansen's Disease in Jeru-

salem, gave similar results to those found in tuberculous patients. A titer of 1:16 or higher was found only in 1% of the control group, whereas it was present in 57% of the tuberculous, and in 67% of the leprosy patients.—F. SAGHER.

MERCAU, A. R., DEPAOLI, E. A., CULASSO, R., CAMOIRANA, J. M., GONZALEZ, A., PODESTA, D. and MARTINEZ PRIETO, P. R. La reacción de Rubino en lepra. (The Rubino reaction in leprosy.) *Leprológia* (Buenos Aires) **8** (1963) 226-227.

The Rubino test was performed in 70 leprosy patients and 30 healthy persons. Specificity is claimed for the reaction. The sensitivity, however, was only 30%. Some relation was noted between the failure of reaction and the antecedents of lepra reaction in lepromatous patients.—E. D. L. JONQUIÈRES.

TATARINOV, JU. S. (Immuno-electrophoretic analysis of blood-serum proteins in leprosy patients.) *Learned notes of the Institute for the Study of Leprosy* **4** (9) (1964) 106-112.

A comparative immuno-electrophoretic analysis of the blood serum proteins in leprosy patients and healthy persons, using "antileprosy" and "antidonor" immune rabbit sera, showed that the qualitative composition of the antigenic components in the serum proteins undergoes no essential change in cases of leprosy.—N. TORSUEV.

MERCLIN, G. V. and POGORELOV, V. N. (Use of the protein fraction of BCG vaccine as an antigen in the complement fixation test with sera from leprosy patients.) *Learned notes of the Institute for the Study of Leprosy* **4** (9) (1964) 113-115.

The authors carried out complement fixation tests in parallel, using as antigens BCG vaccine, rat lepromin and the protein fraction of BCG vaccine prepared by the modified Dharmendra method. The BCG protein fraction proved somewhat less sensitive than the vaccine itself as an antigen in the complement fixation test with sera from persons suffering from lepromatous leprosy and treated with sulfones, and somewhat more sensitive than the vaccine when the test was carried out with sera from persons suffering from treated tuberculoid leprosy.—N. TORSUEV.

DAVLEKAMOVA, F. A. (The effect of BCG vaccination and lepromin testing on the results of the Mitsuda reaction.) *Learned notes of the Institute for the Study of Leprosy* **4** (9) (1964) 116-122.

In the course of a five-year observation period no leprosy was found among negative reactors to lepromin, either among those vaccinated with BCG (330 persons) or those given only the lepromin test. Among persons with a positive reaction to lepromin, and therefore not subjected to BCG vaccination (3793 persons), 3 contracted leprosy (2 lepromatous, 1 tuberculoid). The author considers that persons reacting positively to a 1:80 dilution of lepromin are exposed in endemic foci of the disease to a risk of contracting leprosy just as much as the negative reactors and that they should be covered by active prophylactic measures. A negative lepromin test may become positive both after BCG vaccination and after the lepromin test itself has been carried out. In view of the long incubation period in leprosy, comparative studies of morbidity among those vaccinated with BCG vaccine and those not so vaccinated should cover a long period (at least 10 years).—N. TORSUEV.

MIRANDA, R. N. Investigação dermatológica aplicada à lepra. (Dermatologic investigation applied to leprosy.) *Publicações do Centro de Estudos Leprológicos* (Paraná) **4** (1964) 31-38.

Presence of bacilli in acute lepromatous lesions of the skin is inconstant, a fact indicating the occurrence of cycles in dissemination and destruction of bacilli in these lesions. Bacilli may be found in the blood stream and urine, but at any moment they may disappear from these bodily elements also. Bacilli are found, especially in the form of globi, in leucocytes and exudations from acute lesions. It may be concluded that the

globi are destroyed little by little in these cells. Additional studies based on the original work of Lopes de Favia and others were concerned with lepromin-like reactions to extracts of normal skin (Favia reaction). The Favia reaction was found to agree with the Mitsuda reaction in 92% of cases in type and 41% in intensity. The studies point to nonspecificity of the Mitsuda reaction; there is evidence that it belongs to the biologic phenomena designated "isopathic."—E. R. LONG.

MANZULLO, A., MANZI, R. O., LEFEVRE, H. C. and DE BONIS, J. Estudio comparativo de baciloscopia cutánea y baciluria acidorresistente en la población de la Colonia Sanatorio "Baldomero Sommer." (A comparative study of cutaneous baciloscopia and of acid-fast bacilluria in the inmates of the "Baldomero Sommer" Sanitarium.) Rev. Argent. Leprol. **1** (1964) 23-27.

A search was made for acid-fast bacilli in the urine of 570 inmates of the "Sommer" leprosarium. The bacilli was found in all clinical types and forms in different proportions. A surprising fact was the finding of acid-fast bacilli in the urine of a great number of arrested cases, some of them considered cured for more than 5 years, with persistent negativity in the baciloscopia of mucus and skin, including tuberculoid and indeterminate cases. If these findings are confirmed, the epidemiology of leprosy must be reviewed. Account must be taken of the fact that in other works the authors reported recovery of acid-fast bacilli from a river near the leprosarium, where dirty waters are discharged.—E. D. L. JONQUIÈRES.

SERIAL, S. Ubicación de los bacilos de Hansen en las bacteriemias leprosas. (Location of Hansen's bacilli in leprous bacteremia.) Leprología (Buenos Aires) **8** (1963) 180-182.

Blood from 12 lepromatous patients was studied by the technic of Crow. Only 2 bacilli were found extracellularly. Polynuclears carried from 1 to 3 bacilli, and monocytes from 1 to 15. Seventy-nine bacilli were observed in a single monocyte. In view of the fact that there were 65 polynuclears for each 8 monocytes, it seems that monocytes are the principal phagocytosing cells.—E. D. L. JONQUIÈRES.

VASIL'EV, N. V. and LOPATKIN, O. N. (An attempt to grow a tissue culture for the study of rat and human leprosy.) Learned notes of the Institute for the Study of Leprosy **4** (9) (1964) 137-141.

In tissue cultures of liver and spleen, *M. leprae* was found to penetrate cells (as many as 7 bacilli) for 8 days, but thereafter no increase in its numbers was noted. Rat leprosy was distinguished by the higher "take" rate of its bacilli (*M. lepraemurium*) when grown in a fluid medium, by their marked affinity for white rat tissues and by the more intensive growth of the cells in cultures of liver, spleen and skin tissues. For 8 days there were rat leprosy bacilli in the cells of the tissue culture and even from the 40th to the 50th day, in 8 out of the 20 preparations examined, up to 20-22 bacilli were found, arranged in groups.—N. TORSUEV.

WILKINSON, F. F., GAGO, J. and SANTABAYA, E. Bacillus propterमाराम. Experiencia animal. (*Bacillus propterमाराम*. Experiments in animals.) Leprología (Buenos Aires) **8** (1963) 175-179.

Rats, mice and guinea-pigs were inoculated with bacillus propterमाराम. Early bacilemia, alopecia, cyanosis and dyspnea were noted. Twenty-two days after the inoculation *M. leprae* was recovered from some of the animals. The authors speculate on the possibility of a cycle in *M. leprae* infection in which bacillus propterमाराम could play a role. This hypothesis is based on previous work in which the authors, inoculating hybrid mice with the technic of Chatterjee, recovered the bacillus propterमाराम from the animals. Cyclomyein V has proved effective in the treatment of signs provoked by the bacillus.—E. D. L. JONQUIÈRES.

WILKINSON, F. F., GAGO, J. and SANTABAYA, E. Prueba terapéutica sobre el bacillus proptermarium. (Therapeutic assay of the *bacillus proptermarium*.) Leprología (Buenos Aires) **8** (1963) 186-188.

The following antibiotics were tried on the *bacillus proptermarium*: tetracycline, pyrrolidin-methyl-tetracycline, kanamycin, chloromycetin, and a combination of tetracycline and chloromycetin. The results *in vivo* were very poor, and not in agreement with the results in the antibiograms. Some clinical response, with lessening of infiltration in lesions, was noted.—E. D. L. JONQUIÈRES.

BOSQ, P. Lepra bubalorum. (Lepra bubalorum.) Leprología (Buenos Aires) **8** (1963) 183-185.

The author describes the histopathology of lepra bubalorum, a condition similar to human leprosy that affects the buffalo of Indonesia. The possible identity of this organism and that of "bovine leprosy," which affects cows, is under discussion. It is useful to remember this rare condition because in some circumstances it may be found in Argentina.—(From author's summary)

BRUSCO, C. M. Consideración acerca de la enseñanza y la investigación en leprología (Consideration of teaching and investigation in leprology.) Leprología (Buenos Aires) **8** (1963) 197-200.

For teaching purposes leprology must be studied with respect to: bacteriology, general pathology, histopathology, immunopathology, internal medicine, epidemiology, ecology, alimentation, genetics, experimental leprosy, therapeutics, prevention, rehabilitation and social aspects. The author stresses the need for better training in internal medicine for all leprologists. Prevention of mutilations and functional disorders is one of the most important factors operating against fear, the principal element of prejudice.—E. D. L. JONQUIÈRES.

BRUSCO, C. M. Grandeza y decadencia de los leproarios. (Greatness and decadence of leproaria.) Rev. Argent. Leprol. **1** (1964) 7-10.

Facts and prejudice in leprosy are discussed. The value of leproaria in a leprosy campaign is stressed. Data on the cost of internment of patients are given.—E. D. L. JONQUIÈRES.

(IYONDA LEPROSARIUM, DEMOCRATIC REPUBLIC OF THE CONGO) Annual Report of the Leprosarium 1964, Iyonda's Catholic Mission near Coquilhatville, Equateur Province, dated February 1965, mimeographed, 32 pages, 2 annexes, 1 map, Coquilhatville, P. O. Box 1028, D. R. of the Congo.

The number of hospitalized patients on December 31, 1964, was 668 (252 tuberculoïd, 299 lepromatous, 62 borderline, 41 indeterminate, 14 not classified). Nine deaths have occurred among the patients (2 from poisoning with food or native drugs). Because of administrative difficulties and poor communications, only 40 cured patients have been discharged. Outpatient treatment coverage has been extended deeply in the hinterland, with 486 patients under supervision. Sixty-six new cases have been detected through case finding, among which were 44 cases with early lesions. The coverage includes 75 villages, visited twice monthly by car or bicycle (463 miles of travelling). The staff includes 42 Congolese personnel at present as well as 9 Europeans, 19 of whom are connected directly with medical activities and 23 with administrative or other duties (kitchen, schools, messengers, etc.) In addition, assistance is given occasionally by WHO personnel from Coquilhatville. The staff does not include a physician at present. Training of fellows for the leprosy campaign has been initiated under the auspices of "Les Amis du Père Damien." In addition a dispensary for general medical assistance and public health activities is maintained by the Mission (36,833 consultations, 222 deliveries, 499 children registered at the well-babies clinic, during 1964). Routine laboratory examinations (bacteriologic examination for mycobacteria, hemoglobin, ESR, thick smear for malaria, urine, etc.) numbered 7559 in 1964. Extensive physiotherapeutic activities have

been under way (246 plaster casts, 1603 wax-bath treatments, 137 x-ray examinations.) Twenty-nine patients have completed training in rehabilitation and learned a trade (21 carpenters, 2 electricians, 2 mechanics, etc.). The institution counts 174 crippled persons. Brief and rather optimistic mention is made of the extreme difficulties against which the staff has to struggle in maintaining its activities. It is extraordinary to see how Iyonda's leprosarium is maintaining its standards and extending its activities, in spite of the major difficulties encountered at present in this region with a very limited budget. The main feature is the development in 1964 of outpatient activities, case-finding, and treatment, depending on the institution and covering the whole Kalemba territory. Integration in the general public health service is sought in a reverse way; i.e., leprosy activities are used to stimulate the still existing dispensaries and give general assistance in the area (more than 1,000 consultations for other diseases given during the case-finding activities for leprosy in 1964). A remarkable fact is that, although occasional mention is made of the names of different members of the personnel, the obvious authors of the report are not named. For information, they are: Father Alfonse Cloes, Superior of the Mission, Sister Amanda Lemeire, head-nurse, and Mr. R. Moris, leprosy officer and physiotherapist.)—M. F. LECHAT.