

ABSTRACTS OF CURRENT LITERATURE

SCHOBL, O.; PINEDA, E. V. and MIYAO, I.: Clinical Skin Lesions in Philippine Monkeys Resulting from Experimental Inoculation with Human Leprous Material. *Philippine Jour. Sc.*, 41 (3): 233.

The authors inoculated monkeys repeatedly with fresh leprous material, and demonstrated specific lesions. Besides the nodular skin lesions described by previous workers, necrotic and ulcerative lesions resulted from repeated intracutaneous inoculation with leprous material, at the place of inoculation. An allergic condition was observed by the authors in two experimental monkeys, which they thought resembles in many respects the so-called "lepra reaction."

A definite relation was noted between the forms and numbers of *B. leprae* and the stages of development of the advanced local lesion.—*P. Morales-Otero.*

MIYAO, I.: Yaws Lesions in Mucous Membranes and Report of Two Cases of Genital Manifestations of *Framboesia Tropica*; An Instance of Genital Transmission of Yaws. *Philippine Jour. Sc.*, 41(1): 13.

"Genital yaws lesions like those on other mucous membranes are extensions of framboesic skin lesions located at the body orifices. Their clinical and other characteristics are distinct from contemporary yaws lesions located on firm skin and easily differentiated from genital lesions of syphilis. Like early yaws lesions located on other mucous membranes the genital yaws lesions are far less amenable to specific treatment than the coexisting skin lesions of yaws. A phenomenon was observed in human yaws which resembles the Herxheimer's reaction in syphilis."—*P. Morales-Otero.*

CALDWELL, W. A.: The Immunity Reactions Against Cultivated *Spiro-nema Pallidum* of General Paralytics Treated by Induced Malaria. *Brit. Jour. Exper. Med.*, 11 (1): 1.

The author studies the agglutinating power of normal serum, syphilitic serum and malaria treated sera to cultures of *treponema pallidum*. The cultures used are Noguchi "McD" and Zinsser's culture. He finds that many sera with negative Wassermann reaction are able to agglutinate cultured *treponemata* in lower dilutions. Sera which give a positive agglutination in 1 to 80 or more are almost certainly syphilitic, concludes the author. He states further

that malaria-treated sera and cerebro-spinal fluid show a higher agglutinin content than those not so treated. The author states that the agglutination test is of no value in the diagnosis of syphilis owing to difficulties of technic and lack of definition—and that untreated sera obtained from either normals or syphilitics give no evidence of possessing treponemicidal properties to the cultures used whereas malarial treated sera do so, then spirochaeticidal strength depends on the time that has elapsed since the termination of the malaria.—*P. Morales-Otero.*

FAIRBROTHER, R. W.: Immunization of the Horse with the Virus of Poliomyelitis and the Production of an Antiviral Serum. *Brit. Jour. Exper. Path.*, 11 (1): 43.

Evidence is presented which suggests that the intramuscular immunization of a horse by increasing doses of poliomyelitis virus has led to the development of antiviral bodies in the serum. The resulting serum has been found to contain antiviral properties as shown by the neutralization test.—*P. Morales-Otero.*

KLIGER, I. J. Immunization of Chickens Against Fowl-Pox with Dead Formalized and Phenolized Virus. *Brit. Jour. Exper. Path.*, 11 (1): 10.

The author studies the effect of dead, phenolized and formalized virus—concludes that fowl-pox virus heated to 56° C for one hour or treated with a 0.5 per cent formalin solution for four days no longer produces lesions in susceptible chickens and also fails to induce immunity.

Phenolized vaccine (0.25 per cent phenol) produced from the scab of the lesion still contains active virus twenty, twenty-five and fifty days after the preparation, the survival of the virulence depending on the concentration of the vaccine suspension. One injection of a phenolized vaccine which no longer produces active lesions is sufficient to produce immunity. The failure of the heated phenolized vaccine to produce immunity and the success obtained with the same material unheated indicates that the immunity was induced by the surviving virus says the author.—*P. Morales-Otero.*

DRESEL, I. and LEWIS, M. R.: A Study of Bacteriophage in Tissue Cultures. *Am. Jour. Hyg.* 11 (1): 189.

The activity of bacteriophage (mouse typhoid phage) on homologous bacteria (mouse typhoid bacilli) was not demonstrated in

tissue cultures, either from susceptible or from refractory animals. On the other hand such tissue cultures made on agar plates, instead of hanging drop preparation, show the bacteriophage to be active. The bacteriophage was not influenced by the growth of the cells in tissue cultures, regardless of whether the tissue was of adult or of embryonic type, nor did the condition of the growth of the tissue in the culture influence the stability of the phage.

The tissue cells were not injured by the presence of the mouse typhoid phage. In tissue cultures containing phage alone or in conjunction with mouse typhoid bacilli; the phage was not inactivated even though it did not exhibit its lytic action in the cultures.—*P. Morales-Otero.*

GARRAHAM, J. P.: Sobre Escuelas al Aire Libre y Colonias de Vacaciones (Open-Air Schools and Vacation Colonies) *Semana Médica*, 36 (30): 223, and *Bul. Hyg.*, 4 (12): 973.

The author is the Argentine delegate to the Congress of Infant Welfare, held at Paris in July, 1928. He was asked to study open-air schools and vacation colonies in the countries he visited. He gives a brief sketch of conditions as he found them. In Spain such schools exist in Granada, Barcelona and Madrid, and institutions for the reception of debilitated children in Coruña, Valencia and Santander. In France there are several, some ten or more being named; they are described as being "modestly installed" in chateaux or convents. In Belgium they are numerous; many are private but some are public and have been instituted after the war. Italy, Germany and Austria also have many open-air schools, particularly Italy.

The latter part of the article states the condition of things in this respect in the Argentine. The first open-air school was opened in Buenos Aires in 1909 in Parque Lezama, and the following year a second in Parque Olivera; there are now six. They are opened from September first to May 31st from 8:00 A. M. to 5:00 P. M., and each is provided with baths, gymnasia, arrangements for sun-baths, and exercise as devised by the school doctor. Each school has its own doctor and assistant. Careful inspection and medical examination are made regularly and records kept. Some of the pupils attend for one course only, others remain for as long as three years. The length of stay should be a question for the doctors to decide and not left to the option or whim of parents. As regards vacation colonies, the author, while not ignoring their value, places them far below the

open-air schools, first, because the stay is too brief, and secondly because the time to benefit the people and inculcate habits of hygiene and health is in childhood.—*L. G. Hernández.*

DAYTON, N. A.: The Relationship between Physical Defects and Intelligence. *New England Jour. Med.* 201: 245. *Bul. Hyg.*, 4 (12): 971.

The material used from records of 14,379 mentally retarded children in Massachusetts, whose average I. Q. was boys .71 and girls .69 is given. A long detailed analysis of the relationship of intelligence quotient groups, and the physical conditions; and a similar reverse of the physical groups and the I. Q.'s. The findings confirm previous knowledge, and show that all defects and underweight are more positively associated with the lower levels of intelligence.—*L. G. Hernández.*

LAIRD, D. A.: Experiments on the Physiological Cost of Noise. *Jour. Nat. Inst. Indust. Psychol.* 4: 251. *Bull. Hyg.*, 4 (2): 977.

A description is given of experiments which are being undertaken at Colgate University, U. S. A. on the effects, if any, produced by noise. A special chamber has been constructed, and an electrical device invented for filling the chamber with sounds of varying pitch and intensity. Workers in offices are exposed to noise of about fifty units' intensity; eighty-five units are not uncommon in factories, while in some cases the intensity approaches one hundred. Experiments are in progress not only on human beings but also upon rats. Preliminary observation indicates that noise may cause an average expenditure of energy seventy-one per cent higher for typists than during quiet. Noise appears to increase the tonus of body muscles, an increase which the author ascribes to "fear reaction". Typing work in a quiet phase showed less signs of fatigue than in the noisy phase. The work is proceeding and the present paper is only an interim report, but the author considers that the value of sound absorbing walls has been demonstrated.—*L. G. Hernández.*

HUGHES, T. A.; SHRIVASTAVA, D. L. and SAHAI, P. N.: Observations on the Blood Chemistry in Osteomalacia. *Indian Jour. Med. Research*, 17 (2): 470.

The authors made estimates of the serum calcium and inorganic phosphorus on eleven untreated cases of osteomalacia and on nineteen cases who had been under treatment for various periods. The

blood cholesterol was determined in seven untreated and in eight treated cases. All patients were females.

In all untreated cases except one, the serum calcium was normal or subnormal. Normal values were found in mild or early cases. In one untreated case the serum calcium was above normal.

In the treated cases low serum calcium was found when the response to treatment was poor or when treatment had been of short duration. Improvement was usually associated with a normal or high serum calcium.

The inorganic phosphorus was on the whole, lower in untreated cases. Subnormal value (below 2.5 mg. per 100 c.c.) were found five times among the former and three times among the latter. The lowest figures were in two pregnant subjects.

Low value for blood cholesterol were found in most patients examined. In the untreated patient with high calcium there was a condition of hypercholesterolaemia.—*L. G. Hernández.*

HEWITT, L. F.: Bence-Jones Proteins. *Biochem. Jour.*, 23 (5): 1151.

Bence-Jones proteins from different patients differ in properties. Not all are redissolved in boiling salt solutions. In the presence of alcohol both Bence-Jones proteins and serum proteins are dissolved when the coagulated suspensions are boiled—*L. G. Hernández.*

HARRIS, L. J. and MOORE, T.: Hypervitaminosis and Vitamin Balance. *Biochem. Jour.*, 23 (5): 1114.

The need of the rat for marmite (vitamin B complex) is increased *pro rata* when increasing excess of cod-liver oil concentrate (vitamins A and D) is administered concurrently. In order to produce any given rate of submaximal growth, more and more marmite must be given as more and more of the excess of concentrate accompanies it in the diet. A restricted amount of marmite which is normally adequate for prolonged maintenance becomes inadequate to prevent death when excessive concentrate is given. Rats dying under these conditions could then be cured by administration of additional vitamin B (as wheat-germ extract or marmite) without removal of the extra concentrate. Hence an amount of concentrate which is harmful when given with a moderate marmite allowance is no longer harmful when given with a sufficiently augmented marmite allowance.

It is considered most probable that the antagonistic effect is exerted between vitamin B complex of the marmite, etc., and the vita-

mine A of the concentrate, or cod-liver oil; but the possible action of other unidentified substances is not excluded.—*L. G. Hernández.*

VOGE, C. I. B.: The Colloidal Properties of Serum. *Biochem. Jour.*, 23 (5): 1137.

The author finds that normal and syphilitic sera are different in their power to precipitate gum benzoin solution. In syphilitic serum a zone of precipitation exists which is not present in normal serum. An abnormal substance is present in syphilitic serum which possesses the power of conferring a positive charge upon the serum-proteins and so rendering them unstable in the presence of a negatively charged solution such as gum benzoin. Normal serum undergoes little change when heated at 55° for periods up to ninety minutes; syphilitic serum at the end of this period is indistinguishable in its precipitating effects from normal serum, although little alteration appears to have occurred after heating it at this temperature for thirty minutes.

The abnormal substance present in syphilitic serum is associated with serum-euglobulin fraction, with which it can be separated from the other serum fractions. The effect of the addition of very small quantities of a protamine to normal serum is to cause this latter to simulate syphilitic serum in its precipitating and complement-fixing powers. The effect of heating a serum so treated is to cause it to regain its normal precipitating and complement-fixing powers and so in this respect it is similar to syphilitic serum.

Normal serum and antiserum possess a similar precipitating power upon gum benzoin solution. An almost similar degree of agglutinating power is shown by normal serum upon an antigen of *B. abortus*. The marked agglutinating power of antiserum upon a suspension of *B. abortus* is greatly diminished by subjecting the antiserum to preliminary heating. The substance responsible for the agglutinating power is associated with the serum-euglobulin fraction.—*L. G. Hernández.*

HUFF, CLAY G.: The effects of selection upon susceptibility to bird malaria in *Culex pipiens*. *Ann. Trop. Med. & Paras.* 23 (4): 427-442.

The author has shown that a female *Culex pipiens* which remained uninfested after feeding upon canaries heavily infested with *Plasmodium cathemerium* gave rise to lines that possessed a relatively low susceptibility to infestation with this malarial parasite. Conversely the progeny of infected individuals tended to be susceptible.

Quotations are cited from various works on malaria which tend to bear out the author's statement.—*W. A. Hoffman.*

ST. JOHN, J. H., SIMMONS, J. S., and REYNOLDS, F. H. K.: Transmission of the virus of dengue fever from mosquito to mosquito. *Phil. Jour. Sci.* 41 (3): 381-385.

A mixture of macerated dengue-infected mosquitoes (*Aedes aegypti*) and citrated blood in cell covered by a membrane was made accessible to uninfected mosquitoes of the same species. Two volunteers later submitted to being bitten by these mosquitoes. In both instances typical dengue symptoms occurred.—*W. A. Hoffman.*

SIMMONS, J. S., ST. JOHN, J. H., and REYNOLDS, F. H. K.: Dengue Fever transmitted by *Aedes albopictus*. *Amer. Jour. Trop. Med.* 10(1) 17-22.

Aedes albopictus a common mosquito in Manila was especially numerous during a dengue epidemic. Bred specimens of this species which had fed on dengue patients, after an incubation period, produced dengue in seven volunteers. This was further substantiated by permitting additional individuals of *A. albopictus* to bite one of these volunteers and later to bite two normal persons. Dengue also occurred in the latter.—*W. A. Hoffman.*

PHILIP, C. B. Studies on the transmission of experimental yellow fever by mosquitoes other than *Aedes*. *Amer. Jour. Trop. Med.* 10 (1) 1-16.

Efforts to produce yellow fever in monkeys through the agency of *Taeniorhynchus africanus* succeeded in ten instances, six through inoculation of ground-up bodies, four by means of bites. Difficulty of keeping this mosquito alive in captivity restricted the scope of the experiments. Its domestic habits however indicate it should be given consideration in yellow-fever-control work. *Anopheles gambiae* tested in a similar manner failed consistently to produce yellow fever. In the latter species the virus gradually loses its potency. After four days it has been destroyed or become entirely avirulent.—*W. A. Hoffman.*

SHANNON, R. C., and DAVIS, N. C.: The flight of *Stegomyia aegypti*. *Amer. Jour. Trop. Med.* 10 (2): 152-157.

The authors base the following conclusions on a study of 32,000 stained specimens released from small villages. The maximum air line distance between points of dispersal and recovery was more than

300 meters (two instances). Ninety-five were taken at intermediate points. Of 12,000 specimens released from a boat 900 meters from shore eight were recovered about a mile away. Less than 0.4 per cent of the released mosquitoes were recovered. Specimens were very difficult to obtain in a week. Dispersion is either very thorough, or mortality among the mosquitoes is very high. Three hundred meters apparently does not constitute an exceptional flight for *Stegomyia aegypti*.—W. A. Hoffman.

SHANNON, R. C., BURKE, A. W. and DAVIS N. C.: Observations on released *Stegomyia aegypti*. Amer. Jour. Trop. Med. 10 (2) 138-145.

Four lots of stained *Stegomyia aegypti* were released at different times in the same house. Females were observed biting as much during the night as in the day. The dispersion from the locality of release began within twenty-four hours. Few could be recovered in the house of release after a week. The majority of specimens were recovered in bed rooms. The authors consider the life of *Stegomyia* in nature to be relatively short; or that dispersion is thorough and widespread. Geckos were observed feeding on many of the released mosquitoes. Gentian violet as a stain for mosquito-dispersal experiments is contra-indicated, due to its apparently toxic action.—W. A. Hoffman.

CHANDLER, A. C.: Hookworm Disease. MacMillan, Sept. 1929.

Chandler's Hookworm Disease constitutes a noteworthy contribution to the fields of medicine and parasitology. One of our eminent parasitologists, the author is well equipped to write upon this subject because of a three-year period spent in India devoted chiefly to hookworm studies.

Since the appearance of Dock's work on hookworm disease no general study upon this important phase of parasitology has been published. The great advances in our knowledge of this important topic made chiefly within the present decade are evidenced by the enormous mass of literature encountered in numerous publications. This the writer has gathered, summarized and evaluated in a logical manner. The book itself is quite readable and stimulating. Anyone, physician or biologist, interested in one or more aspects of the hookworm problem can profitably consult this volume. Without doubt it will serve as our standard reference upon the subject for many years.—W. A. Hoffman.

FAUST, E. C.: The *Endamoeba coli* index of *E. histolytica* in a community. Amer. Jour. Trop. Med. 10 (2): 137-143.

From data supplied by himself and other investigators Faust concludes that a low *E. coli* index points to a low *E. histolytica* incidence, and conversely a scarcity of *E. coli* suggests few *E. histolytica*. The incidence of *Endolimax nana* also seems proportional to that of *E. coli* and *E. histolytica*. The presence of *E. coli* the author believes to be evidence of feces consumption and therefore serves as a potential indicator of *E. histolytica* incidence.—W. A. Hoffman.

TRAUT, E. F. and HERBOLD, R. D.: The Influenza Epidemic of 1928: A Study of Its Bacteriology. Arch. Inter. Med., 45 (3): 412.

This article contains a bacteriological study of cultures from the nasopharynx and sputums of patients acutely ill with influenza during the recent epidemic (1928). Two types of organisms were constantly found: a green-producing streptococcus and a gram-negative diplococcus. The streptococci were found to be pathogenic for animals; they produced a toxin; vaccines made from them would seem to immunize against the influenza infections and they all reacted similarly in fermentation and bile-solubility tests. They also showed relationship in cross-agglutination experiments.

"As the result of the careful work in the previous epidemic (1918)", comment the authors, "and the bacteriology of the respiratory secretions of the last epidemic, Mather's coccus should be tentatively considered the specific cause of influenza until proof is produced to the contrary. It would seem justifiable to attempt immunization with the filtrates of this streptococcus."—A. L. Carrión.

CAWSTON, F. G.: Creeping Eruption in Natal. Jour. Trop. Med. & Hyg., 33 (4): 56.

The author, who had previously published a study of creeping eruption as experienced in Natal, has found upon further research that *Ankylostoma braziliense* is a common parasite among domestic animals in this neighborhood, especially in those quarters of the town where the eruption is very likely to occur. As children whose skin has become infested often suffer from intestinal worms also, it is supposed that some of the larvae which penetrate the skin may successfully pass into the general circulation giving rise to intestinal symptoms although it is difficult to understand why the larvae should find such difficulty in escaping into the general circulation at times.

The observation made at Formosa that bacilli adherent to the surface of the larvae are not necessarily removed by its passage through the human skin is taken by the author as a possible explanation of the common occurrence of boils and local inflammation shortly after a child has been exposed. Under the light of this observation it is also possible, he thinks, that other intestinal and even enteric diseases might result from the infestation with these larvae.—*A. L. Carrión.*

AYRES, S.: Gastric Secretion in Psoriasis, Eczema and Dermatitis Herpetiformis. *Arch. Dermat. & Syph.*, 20 (6): 854.

Fractional gastric analyses are studied in nineteen cases of psoriasis, eleven cases of eczema and four cases of dermatitis herpetiformis. Fifty two per cent of the psoriasis, seventy-two per cent of the eczema and seventy-five per cent of the dermatitis herpetiformis cases showed a low total acid and a low free hydrochloric acid. Some of the cases showed remarkable improvement after treatment along the indicated lines. "Owing to the small number of cases", admits the author, "sweeping deductions are not justified concerning either the causal relationship between the dermatoses and the abnormality of the gastric secretion or the results of treatment as indicated by the gastric analysis."—*A. L. Carrión.*

SCHAMBERG, J. F. and BROWN, H.: The Chemistry of the Blood in Diseases of the Skin: A Study of Eight Hundred and Seventy-Five Cases. *Arch. Dermat. & Syph.*, 21 (1): 1.

The authors report their observations on the blood chemistry of 875 cases of diseases of the skin over a period of seven years. The following conclusions are reached:

1. Age exerts a distinct influence on the average nitrogenous content of the blood. From the third to the eighth decade there is a distinct and steady rise of nonprotein nitrogen, urea nitrogen and, particularly, uric acid.

2. Males exhibit more nonprotein nitrogen, urea nitrogen and uric acid in the blood than females.

3. In eczema and in pruritus, particularly of the generalized type, we found a perceptibly higher percentage of patients with an excess of nonprotein nitrogen, urea nitrogen and uric acid than in other dermatoses.

4. A study of the blood chemistry of patients with refractory

dermatoses is a material aid in prescribing appropriate dietaries."—
A. L. Carrión.

SWARTZ, J. H.; BLUMGART, H. L. and ALTSCHULE, M. D.: Ethyl Iodide Inhalations in the Treatment of Mycotic Infections of the Skin and Allied Conditions. *Arch. Dermat. & Syph.*, 21 (2): 182.

Thirty three cases of dermatomycoses, chiefly epidermophytoses of the hands and feet, successfully treated with ethyl iodide by the inhalation method are presented. This is a new and simple method of administering iodine internally. It is claimed to be nontoxic. Children may be treated as well as adults. Considering the stubborn resistance of some of these cases to all sorts of treatment, this method should be most gladly welcomed.—*A. L. Carrión.*