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PHARMACEUTICAL ABSTRACTS

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ABSTRACTORS

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Arsphenamine and Solvent Liquid—Ampuls Suitable for Holding, in Separate Compartments. A multicellular ampul is formed of non-magnetic material such as glass, and is provided with a number of sealed cells separated by partitions of frangible material such as glass, at least one of which partition is associated with a ferromagnetic member such as a steel ball, upon which a magnetic pull may be exerted for destroying at least part of the partition so that the contents of the cells may mix with each other.—JACOB A. SAFFIR. U. S. pat. 2,184,152, Dec. 19, 1939. (A. P.-C.)

Chemical Incompatibility. With the development of chemotherapy and new drugs, incompatibilities are also found. The following preparation frequently prescribed in the Hospital Jose Senna is an example: Potassium bromide, 10 Gm., sodium bromide, 6 Gm., ammonium bromide, 4 Gm., sodium luminal 0.40 Gm., syrup of orange flower, 80 cc., syrup of tolu, 50 cc., distilled water, *q. s.* to 200 cc. The association of sodium luminal and ammonium bromide is incompatible but may be resolved if the luminal is dissolved first and then the ammonium bromide. The other bromides do not affect the preparation.—ALFREDO L. REMEZZANO. *Rev. Col. Farm. Nac., Rosario*, 6 (1939), 81. (G. S. G.)

Drug Extraction. XXIII. The Extraction of Ipomea. In previous studies on official resins the relative value of different menstrua was studied. The present report deals with the relative merits of different methods of extraction. Alcohol was found as efficient as alcohol-water (9:1). In the maceration of ipomea with an excess of alcohol most of the resin was dissolved out within 15 minutes. In percolation experiments, at least 90% of total resin was obtained in 250 cc. of percolate from 250 Gm. of drug. More than 99% was obtained in the first 1000 cc. of percolate from 1000 Gm. of drug using forced percolation through a long column of drug.—WILLIAM J. HUSA and THOMAS J. MACEK. *Jour. A. Ph. A.*, 29 (1940), 455. (Z. M. C.)

Drugs and Galenicals—Observations on the Investigation of. An address.—W. PEYER. *Süddeut. Apoth.-Ztg.*, 80 (1940), 101; through *Chem. Abstr.*, 34 (1940), 4524. (F. J. S.)

Drying Ointment. A drying substantially non-separating ointment base capable of being spread as a continuous film upon the skin, comprises a solution, in a volatile solvent, of a film-forming material and a substantially stable suspension, in such solution, of a material insoluble therein, one of the materials being a condensation product of a phenol and a member of the group consisting of aldehydes and ketones capable of forming resinous condensates with phenol, and the other being a condensation product of a urea and an aldehyde, the proportion of solvent and of solid material being such that the preparation is of plastic, non-flowing consistency.—REINHARD BEUTNER, assignor to PARKE, DAVIS & CO. U. S. pat. 2,184,575, Dec. 26, 1939. (A. P.-C.)

Gelatinous Alumina. The material is the subject of a British Patent (No. 487,855) granted to T. Dickeson, and consists of ordinary aluminum hydroxide which is "activated" or rendered "inert" by prolonged boiling, exposure to sunlight or to ultraviolet light. During this activation treatment the product becomes insoluble and develops its emulsifying properties.—ANON. *Perfumer. Essent. Oil Record*, 31 (1940), 357. (A. C. DeD.)

Hydrogenated Castor Oil as an Ointment Base. V. Jellified Ointments. Petrolatum has wide use in ointments because of its consistency and stability. Sometimes a liquefying base would be desirable and this can be obtained by substituting hydrostearic acid for wax or other solidifier in a cold cream. Experimental work along this line was carried out. A number of ointments were prepared with a stock jellified liquid petrolatum. Formulas are given for a cold cream, a liquefying cold cream and a liquefying cold cream (not emulsified) and a brilliantine. The hydrostearic acid was found to be jellifying for liquid petrolatum and fixed oils in quantities of 1 or 2%. In larger quantities it produced gels with hydrocarbons and volatile oils.—GEORGE W. FIERO. *Jour. A. Ph. A.*, 29 (1940), 502. (Z. M. C.)

Pectin Pastes. Monographs for a pectin paste and a thin pectin paste are offered.—KARL B. ROSEN. *Bull. Natl. Formulary Committee*, 9 (1940), 35–39. (H. M. B.)

Sirupus Colæ Compositus. As a result of a study of the stability of the solution, the following directions for its preparation is given: 0.1 part strychninum nitricum, 50 H_2O, 5.0 ferrum glycerinophosphoricum (powder), 12.5 citric acid and 0.2 quinine-HCl are mixed. After solution, 100.0 parts natrium glycerinophosphoricum (50%) are added, and, without regard to the precipitate formed, a solution of 100.0 parts extractum colæ fluidum and 660.0 sirupus simples also added. The two solutions are mixed and 20.0 parts talc added. After three days the mixture is filtered and 30.0 parts alcohol (95°) and 40.0 glycerol are added to the filtrate. There remains in solution 62% of the iron added. Of the 1.4475 Gm. alkaloids added, 1.0721 Gm. remain in solution. The density of the syrup is 1.258 and the p_H is 4.5.—J. WOJCIECHOWSKI. *Wiadomości Farm.*, 65 (1938), 135; through *Chem. Abstr.*, 34 (1940), 4230. (F. J. S.)

Suppositories—Glycerin. A short historical sketch is presented, tracing the discovery of glycerin and its use in medicine. Various formulas for the preparation of glycerin suppositories are considered. Those containing sodium stearate and high concentrations of glycerin are difficult to keep because of their high degree of hygroscopocity. The addition of other substances does result in some decrease in hygroscopic nature. Suppositories made according to the following formula: cacao butter 20 parts, glycerin 20 parts and anhydrous lanolin 0.5 part contain an emulsion of glycerin and are far less hygroscopic. It is important that the glycerin be thoroughly shaken with the melted cacao butter so as to thoroughly emulsify it. Seventeen references are cited.—H. LEHMANN and F. HEDIGER. *Pharm. Acta Helv.*, 14 (1939), 83–88. (M. F. W. D.)

Tooth Filling. A solution for saturating a fibrous filling such as absorbent cotton for solidifying and hardening when subjected to water is prepared from 3 lb. of gum sandarac, 2 oz. of gum camphor, 2 oz. of methyl salicylate, 2 oz. of thymol and 2 quarts of alcohol.—WM. G. TURNER. U. S. pat. 2,178,821, Nov. 7, 1939. (A. P.-C.)

PHARMACEUTICAL HISTORY

Chinese Illustrations of Apothecaries of 1800. Five illustrations.—GILBERT W. LÜNNEFELD. *Wien. Pharm. Wochschr.*, 72 (1939), 406–407. (H. M. B.)

Gold Dealers to the Vienna Imperial Court. Franz Joseph I and the Three Alchemists. His-

torical.—JOSEF RICHLING. *Wien. Pharm. Wochschr.*, 73 (1940), 360–364. (H. M. B.)

Pharmacy—General Evolution of, with Particular Reference to Brazil. This monograph traces the development of pharmacy from early Asiatic civilizations, Egyptian, Greek and Roman to medieval European. Referring especially to Galen, Celsus, Pliny and Scribonius in the Roman Empire, mention is also made of the modification and enrichment of the materia medica by the Arabs in Spain. French pharmacy developed in the 13th century and Venetian in the 16th. The Venetians promoted international commerce in drugs. Charlatanism and fraud reached their height in the 14th century. Roger Bacon in the 13th and Paracelsus in the 16th made alchemy an experimental science. The French Société de Pharmacie was organized at the end of the 18th century and its great names include Pelletier, Caventou, Guignard. The 19th century saw the development of experimentation in pharmacodynamics. In this epoch are included Liebig, Berzelius, Koch, Lister and Pasteur. Pharmacy accompanied the evolution of chemistry and physics, reaching through the biological sciences to the present studies on vaccines, vitamins and hormones. The personal element of the pharmacist compounding his own drugs has given place to the industrial laboratory; and the modern drug store has become a variety store. In Brazil the national pharmacopœia resembles in form other established ones. The State regulates and supervises industrial laboratories. The chief problem as in other countries, is establishing control over a vast number of drug specialties and proprietaries. As yet Brazil has not adopted the North American type of chain drug store, but the old pharmacy has been transmuted. The ideal of a pharmacy for pharmaceuticals seems unattainable. Pharmacy is now divided into two professions, that of doctor of pharmacy and the industrial pharmacist.—CARLOS DA SILVA ARAUJO. *Lab. Clin.*, 142–143 (1939).
(G. S. G.)

Pharmacy in the Seventeenth Century. Pharmacy in the 17th century still had traces of alchemy with emphasis on mineral and metal. Dioscorides was the dominant authority. Arabic influence was notable in Spain. The pharmacy itself contained the usual flasks, jars, mortars, balances and a huge open fire. Prescriptions and commodities were of philosophical value, though there were some vegetals of genuine value derived from the Arabs. But in general the empiric and absurd predominated. The apothecary shop also served as a gathering place for men, clerics, soldiers, lawyers, business men, whose discussions included topics of the day.—BLANCO JUSTE. *Farm. Nueva*, 5 (1940), 43.
(G. S. G.)

Ringk von Wildenberg, C. E. A biographical sketch of C. E. Ringk von Wildenberg, pharmacist, 1818–1882.—J. A. HÄFLIGER. *Pharm. Acta Helv.*, 14 (1939), 76–82. (M. F. W. D.)

Subduer of Pain. A biography of Friedrich Wilhelm Sertürner.—HERBERT MÜLLER-HESTER. *Wien. Pharm. Wochschr.*, 73 (1940), 279–280.
(H. M. B.)

Suppositories in the Olden Times—Preparation of. Historical.—ANON. *Wien. Pharm. Wochschr.*, 73 (1940), 353–355. (H. M. B.)

PHARMACEUTICAL EDUCATION

Indicator—New Universal. Five mg. of thymol blue, 25 mg. of methyl red, 60 mg. of bromothymol blue and 60 mg. of phenolphthalein are dissolved in 75% alcohol to make 100 cc. of solution; this is then neutralized with hundredth-normal sodium hydroxide to produce a green color, but for high and low p_H values it can be used directly. This combination shows at whole p_H values between 4 and 10 the following distinct color changes: red, orange, yellow-green, blue, indigo and violet. Intermediate color changes are recognizable with an accuracy of 0.5 p_H. It is suitable for lecture purposes in demonstrating buffer action, etc.—J. H. N. VAN DER BURG. *Chem. Weekblad* 36 (1939), 101–102; through *Chimie & Industrie*, 42 (1939), 959. (A. P.-C.)

New Pharmacy-Chemistry Building at Montana State University. The earthquake-proof building contains all conveniences necessary for the School of Pharmacy and the Department of Chemistry. On the top floor is a large sky-lighted laboratory for general chemistry and qualitative analysis; wall space in such a laboratory is entirely available for ducts, fans, shelves, etc.—J. W. HOWARD. *Ind. Eng. Chem., Anal. Ed.*, 12 (1940), 441–442.
(E. G. V.)

Pharmaceutical Regulations in Argentina. The report of the Sub-Section on Pharmacy of the National Medical Congress recommends: The industrial preparation of medicaments should be under pharmaceutical supervision. There should be revision of import duties permitting the free entry of needed raw materials, and adequate protection for national manufactures. Alcohol for medical and chemico-pharmaceutic use should be tax exempt. Preference should be given to domestic products when they are equally as good as imports. Provision for further study of pharmaceutical problems in the schools, with the creation of scholarships by chemico-pharmaceutical industries, thus developing coöperation between university and industry. There should be further encouragement of the study of native plants of possible pharmaceutic value; the introduction of foreign medicinal plants suitable for our soil and the creation of official scientific institutes for industrial experiment.—FRANCISCO CIGNOLI and LADISLAO RETI. *Rev. Col. Farm. Nac., Rosario*, 6 (1939), 67. (G. S. G.)

Pharmacist—What Every, Should Know. Pharmaceutics, the chief subject in the pharmaceutical curriculum, and pharmaceutical chemistry are discussed.—C. BEAVEN. *Indian and Eastern Chemist*, 21 (1940), 18, 64. (A. C. DeD.)

PHARMACEUTICAL LEGISLATION

Food and Drug Bill—Most Comprehensive. Over a period of 25 years before the enactment of the Food and Drugs Act in 1906, more than a hundred bills were introduced into Congress. One introduced by Representative Lee of Virginia in 1888 is considered the most comprehensive. The paper includes a biographical sketch of William H. F. Lee and discusses some of the salient features of the bill.—LYMAN F. KEBLER. *Jour. A. Ph. A.*, 29 (1940), 505. (Z. M. C.)

German Medicines—South African Firms to Manufacture. The Union Government has decided to render available to South African firms under certain conditions certain German medicinal patents registered in Pretoria. It is estimated that about 60 applications will be made to the Patent Office by South African manufacturers. The German holders of the patents are to be protected by the Union Government, and users of the patents will be required to pay into the Treasury certain royalties which will be retained in a special account until the end of the war, when it is planned to make restoration to the original holders. Permission to manufacture such medicines in South Africa will be granted only for the duration of the war and for six months after the conclusion of peace. A new Merchandise Marks Bill, which Parliament is ex-

pected to pass this year, will render it necessary for all chemical and other goods to be clearly marked with the country of origin.—ANON. *Chemist and Druggist*, 132 (1940), 367. (A. C. DeD.)

Pharmaceutical Legislation. January 12, 1938, the General Government created a Council of Official Colleges of Pharmacists to replace the National Pharmaceutical Union. Its functions are: (*a*) to study the reorganization of Provincial Colleges of Pharmacy in all Spain, to conform with principles of health for the new State; (*b*) to study a project of cultivation and control of medicinal plants; (*c*) to plan a corporate fund to repair losses suffered in the war; (*d*) to devise solutions of problems confronting the profession of pharmacy. The General Council presented its recommendations and plans to the General Government within six months of this date. On December 27, 1939, the Council established the National Section for Chemico-Pharmaceutical Production, to improve and develop new methods and new products and to endeavor to make Spain less dependent on foreign drug products. The Council has also appointed a National Section of Inspectors of Municipal Pharmacists. It has retained the Royal decree of July 8, 1930, with reference to prescriptions and files for special prescriptions for hypnotics which are given to inmates of asylums.—EDITORIAL and NEWS NOTES. *Farm. Nueva*, 5 (1940), 35, 40, 48. (G. S. G.)

Proprietary Medicines, Etc., Imports. The following statement has been issued by the Board of Customs regarding the interpretation of the term "Compounded Medicinal Preparations" appearing in the Import of Goods (Prohibition) (No. 13) Order, 1940: (1) Tablets, capsules, cachets, ampuls and liquid preparations containing more than one ingredient, whether active or inert, are regarded as compounded medicinal preparations, and therefore as being prohibited to be imported except under license issued by the Board of Trade. (2) Tablets, capsules, cachets, ampuls and liquid preparations containing only one ingredient are not regarded as compounded medicinal preparations, but may in some cases fall within other descriptions of goods requiring an import license.—ANON. *Chemist and Druggist*, 132 (1940), 367. (A. C. DeD.)

Serums Authorized in France. Two new serums authorized in France by decree of the Minister of Public Health, dated April 11th, are, first, an "injectable solution of calves' liver intended for the treatment of anemia, obtained by maceration of the flesh of fresh or cold-stored organs in acidified hydroalcoholic solution, partly deprived of its protein, dried and prepared in water solution adjusted to p_H 3.5 and put up in tubes corresponding to 50 Gm. of fresh organ and 0.2 Gm. of dry extract per cc. of preparation," and, second, "an extract of the anterior lobe of the pituitary of the ox, presented in the form of an injectable oily suspension, obtained by treatment of the powder of dried and crushed organs by ammoniacal acetone. Strength is to be expressed in rat units, one rat unit corresponding to the smallest quantity of hormone capable of producing the appearance of yellow bodies in the ovaries of 75% of impubescent female rats within 100 hours after inoculation."—ANON. *Chemist and Druggist*, 132 (1940), 382. (A. C. DeD.)

Sugar and Glucose—Rationing of. It is announced by the Ministry of Food that a further reduction of 10% from pre-war usage will be made on July 1st in supplies of sugar to manufacturers. No reduction will be made in respect of allocations that are at present only 40% or less of pre-war requirements. Among the products affected by the new reduction will be drugs and medicinal preparations, so that the allocation to manufacturing chemists will be at the rate of 90% of pre-war usage. The percentage allocations of glucose to manufacturers from June 1st will be at the existing rates for sugar, and on July 1st will be subject to the same reduction as notified above.—ANON. *Chemist and Druggist*, 132 (1940), 367. (A. C. DeD.)

PHARMACEUTICAL ECONOMICS

Aromatic Chemicals. A brief discussion of the possibilities in this field of production due to curtailment of supplies of many essential oils.—ANON. *Drug and Cosmetic Ind.*, 47 (1940), 541. (H. M. B.)

Botanicals. A survey of the crude drug production and market under the present world conditions.—ANON. *Drug and Cosmetic Ind.*, 47 (1940), 515–521, 538–539. (H. M. B.)

Chemicals—Production of, in India. Sulfuric acid, bichromates and ten other important chemicals will be in production in India by early 1941. Native Simla pyrites are the source of the acid.—*Indian Med. Gaz.*, 75 (1940), 490. (W. T. S.)

Essential Oils. A survey of the production and market for essential oil under the present world conditions.—ANON. *Drug and Cosmetic Ind.*, 47 (1940), 523–529, 539, 543. (H. M. B.)

Finnish Pharmacists—Service of, in the Finnish-Russian War of 1939–1940. Both the civilian and the military services of Finland's pharmacists in the war of the winter of 1939–1940 are described. The invaluable aid afforded by gifts from Sweden, especially of sera, vaccines and sulfapyridine tablets is noted.—B. POMOELL. *Farm. Revy*, 39 (1940), 639. (C. S. L.)

Gum Acacia Imports—United States. In 1939 the United States imported 9,199,623 lb. of gum acacia, compared with 8,735,447 lb. in 1938, and 9,494,117, lb. in 1937. Limited quantities were of French African, but practically all came from Egypt.—ANON. *Chemist and Druggist*, 133 (1940), 95. (A. C. DeD.)

Medicinal Chemicals. A survey of the production of chemicals especially in this country.—ANON. *Drug and Cosmetic Ind.*, 47 (1940), 531–533. (H. M. B.)

Pharmaceutical Economics—Current Problems in, in the Philippines. This article refers particularly to the new tax laws recently enacted in the Philippines. They are radically different from those formerly in force for 20 years. The first is the professional tax which permits the pharmacist to exercise his profession. This is 12 pesos a year payable annually or semiannually. In addition he must pay the graduated fixed annual tax ranging from 4 to 300 pesos if his gross annual sales exceed 2000 to 500,000 pesos. Added to these are the prohibited drugs (opium, etc.) tax of 6 pesos, the weights and measures license—30¢ for 30 Kg. to 3 pesos for 3000 Kg.—with a 500% surcharge for tardiness in paying. There is, too, the municipal license which varies in different municipalities, which is graduated and dependent on gross sales. Alcohol and cigarette licenses must also be paid if these are included in his stock: 12 pesos per year for alcohol and 8 pesos for tobacco. Manufacturers pay a fixed privilege tax of 10 pesos per year and percentage taxes of 10% on cosmetics and perfumes. Medicinal and toilet preparations of which, excluding water, alcohol is the chief ingredient pay 10%. Pharmaceutical specialties, galenicals, dentifrices, etc., pay 3½%. The license for prohibited drugs is 48 pesos per year. In the city of Manila the municipal tax on the manufacturing pharmacist adds 60 pesos for machinery or 30 pesos without; 40 pesos

for perfumes and lotions but only 30 pesos for bay rum, hair tonics or pomades and lipstick.—JOSE E. JIMENEZ. *Rev. Filipina. Med. Farm.*, 30 (1939), 387. (G. S. G.)

Southern Rhodesian Trade. During the first quarter of 1940 drugs and chemicals to the value of 117,189 pounds were imported into Southern Rhodesia, compared with 95,395 pounds in the corresponding period of the previous year. Exports in the same group totaled 1131 and 1220 pounds, respectively.—ANON. *Chemist and Druggist*, 133 (1940), 95. (A. C. DeD.)

Spanish Liquorice Root. It is estimated that in 1939 approximately 400 metric tons of liquorice root were collected and made available for export.—ANON. *Chemist and Druggist*, 33 (1940), 95. (A. C. DeD.)

Synthetic Medicines—Production of, in Japan. One result of the China "incident" has been to increase the production of chemicals and medicinal preparations in Japan. In 1937, 2649 kinds of medicines were produced, in 1940 the number is 25% higher and an increase of more than 25% in value is anticipated. About 70% of production consists of synthetic medicines, of which, before the Great War of 1914–1918, hardly one was manufactured in Japan. Notable instances are aspirin, amidopyrine, phenacetin, guaiacol carbonate, codeine phosphate, saccharin, etc. Many medicines originating in foreign countries, and not yet patented in the Far East, are being produced commercially. To encourage production the Japanese government has been granting subsidies. A method of extracting *p*-thymol (for conversion into thymol) from waste materials in the pulp industry has made the production of thymol possible. The Tokio Hygienic Laboratory produces codeine phosphate, papaverine, thebaine and narcotine for distribution throughout Japan, Korea and Manchukuo.—ANON. *Chemist and Druggist*, 132 (1940), 382. (A. C. DeD.)

MISCELLANEOUS

Ammonia in Toilet Preparations. The author states that ten samples used in the non-electric method of hair waving consisted of aqueous solutions of ammonia and sodium sulfide. The ammonia content ranged from 3.9% to 9% and six samples contained more than 5%, thus coming within the scope of the local Poisons Regulations. The sulfide (as hydrogen sulfide) ranged from 0.45% to 2%. A solution containing 9% of ammonia would reduce hair strength to a pronounced extent, but the effect of 5% solutions would probably be transitory. In considering the question of operatives using such solutions it was calculated that if an ounce of solution (sufficient to treat the hair of two persons) containing 9% of ammonia and 2% of hydrogen sulfide were completely evaporated in a room 12 ft. square and 12 ft. high, the concentration of ammonia in the atmosphere would be 0.007%, and that of hydrogen sulfide 0.001%. Such concentrations, according to authority, are non-poisonous, though objectionable in odor. The process is noxious and, if not unhealthy, certainly vitiates the air.—F. E. CONNAH. *Perfumer. Essent. Oil Record*, 31 (1940), 135. (A. C. DeD.)

Bleach Ointment Standard. The British Standards Institution has issued a specification for anti-gas ointment, the object of which is to provide a guide to the quality of a satisfactory ointment for anti-gas treatment. The Standard has been prepared at the request of the Air Raid Precautions Department of the Ministry of Home Security. The ointment is known as bleach ointment (Anti-Gas Ointment No. 1) and shall be in the form of a uniform smooth paste, free from foreign matter and visible impurities and shall conform in all respects with the requirements of this Standard. It shall consist of equal parts by weight by bleaching powder and white mineral jelly. The ingredients shall be thoroughly mixed together and care shall be taken to avoid undue heating during mixing. The ointment shall not contain more than 0.5% of coarse particles and immediately after being prepared shall contain not less than 14.0% of available chlorine. Labels on containers shall bear the following particulars: The name "Bleach Ointment (Anti-Gas Ointment No. 1)"; the name of the maker; the date of manufacture. The method of assay is also given.—ANON. *Chemist and Druggist*, 132 (1940), 385. (A. C. DeD.)

Collodion—Preparation of. II. By using 90% alcohol as adjuvant, as recommended by the Ger. Pharm. VI, variations in viscosity of the cellulosic solution are practically eliminated. The viscosity is minimum when the solvent consists of equal parts of alcohol and ether.—K. G. KREBS. *Pharm. Zentralhalle*, 80 (1939), 360–366; through *Chimie & Industrie*, 43 (1940), 410. (A. P.-C.)

Cosmetics Industry. A discussion dealing more particularly with the importance of a knowledge and application of scientific principles.—G. MAZUYER. *Chimie & Industrie*, 42 (1939), 223–233. (A. P.-C.)

Detergents from Kerosene. Primary amine hydrochlorides are less satisfactory as foaming agents than sodium lauryl sulfate.—A. R. PADGETT and E. F. DEGERING. *Ind. Eng. Chem.*, 32 (1940), 486–488. (E. G. V.)

Disinfectants. The definition and classification of disinfectants are discussed and the practical methods of standardizing disinfectants for a wide range of parasites and pests (from protozoa to rats) are described.—G. PENSO. *R. Ist. San. Pubbl.*, 2 (1939), 623–670; through *J. Soc. Chem. Ind.*, 59 (1940), 91. (E. G. V.)

Fumigation—Recent Experiments on. Toxicity and methods of determining the concentration of fumigant are discussed.—H. B. P. PAGE and O. F. LUBATTI. *Chemistry and Industry*, 59 (1940), 172–179. (E. G. V.)

Fungicide. Phenothiazone is used with lime, bentonite, water, etc.—MARION C. GOLDSWORTHY, dedicated to the free use of THE PEOPLE OF THE U. S. A. U. S. pat. 2,177,198, Oct. 24, 1939. (A. P.-C.)

Hair Dye Compositions. With an organic dye such as Brown BN (Color Index No. 422), etc., use is made, as an agent to cause adherence of the dye to the hair, of formamide or other water-soluble compound having the nucleus $R\text{CON}=$, in which R represents hydrogen, a lower alkyl, cycloalkyl, aryl, aralkyl, alkylol, aralkylol or derivatives.—WOLF KRITCHEVSKY, assignor to RIT PRODUCTS CORP. U. S. pat. 2,185,467, Jan. 2, 1940. (A. P.-C.)

Hair Dyes. An examination of the effects of dihydric and trihydric phenols on the oxidation of diamines in hair dye mixture shows that the function of the phenols is to promote the formation of fast colors having brown shades. They prevent the formation of insoluble Bandrowski's base and so give a better color for the same amount of diamine. Study of the chemical reactions involved shows that in general there is first the formation of red or brown indophenols with the oxygen in the ortho position. These indophenols then condense with the formation of oxazines and oxazones, which form a permanent color with the hair. A color film was shown to demonstrate the formation of these dyes and the development of the color on the human head.—

H. E. Cox. *Perfumer. Essent. Oil Record*, 31 (1940), 135. (A. C. DeD.)

Insect Repellents. A discussion with seventeen formulas and twenty-two references.—M. A. Lesser. *Drug and Cosmetic Ind.*, 48 (1941), 149–151, 165. (H. M. B.)

Insect Repellents. Study of Comparative Repellency by the Sandwich-Bait Method Using Confined House Flies. Uniform baits are prepared with brown molasses applied to small strips of white blotting paper (1 x 4 inches) as a lure. Various materials are tested as repellents by uperimposing over the bait a porous paper cover impregnated with the chemical. Citronellol was used as the standard. The bait strips are placed in a cage where they are exposed to common house flies. Butyl mesityl-oxide-oxalate was found to be much more repellent than citronellol. Triethanolamine, amyl salicylate and diethylene glycol monobutyl ether acetate also showed slightly greater efficiency than citronellol.—L. B. Kilgore. *Soap*, 15 (1939), 103–111; through *Chimie & Industrie*, 43 (1940), 387. (A. P.-C.)

Insecticides and Fungicides. An emulsion is formed of a mineral oil, a finely divided solid dispersing agent, water, gum emulsion stabilizer, preservative and an alkaline chemical to maintain the p_H at 8–9. In an example, mineral oil 67, Fuller's earth 6.3, gum arabic 1, formaldehyde 0.12 and sodium carbonate 0.09%, the balance being water, is employed.—T. P. Remy and W. B. Hendrey, assignors to Texas Company, U. S. pat. 2,091,935; through *J. Soc. Chem. Ind.*, 59 (1940), 77. (E. G. V.)

Insecticides—Protection of, against Light. Residues from the preparation of alumina (red mud) or other pigments of similar color or composition are added to the insecticide to protect it against the action of light.—Soc. des Usines Chimiques Rhône-Poulenc. Belg. pat. 434,088, May 31, 1939. (A. P.-C.)

Luminous Paints. The luminous lipstick is produced by means of a luminous pigment, one variety of which glows in the dark and another glows when exposed to ultraviolet light. While the former is used for mural and theatrical decorations and performances, the latter, for practical effect as lipstick, requires the special light rays.—Anon. *Perfumer. Essent. Oil Record*, 31 (1940), 12. (A. C. DeD.)

Methyl Cellulose in Cosmetics. The use of this compound in waving fluids, oil-wax lipsticks, powders, hand lotions, mascara and especially as a thickening agent is discussed.—Thorpe Deakers. *Drug and Cosmetic Ind.*, 48 (1941), 152, 165. (H. M. B.)

Perfume Bases—Manufacture of. (*A*) ψ-Ionone is converted into ionone or ψ-methylionone into methylionone by heating (at the boiling point) with 55–80% aqueous formic acid. (*B*) α-Methylionones *a* and *b* (containing not greater than 35% of *a*) are separated by agitation with 60–90% aqueous formic acid (at 50°), and removing the undissolved *b*; the oil that separates on cooling is largely *A*.—W. C. Meuly, assignor to E. I. du Pont de Nemours & Co., U. S. pat. 2,080,497–8; through *J. Soc. Chem. Ind.*, 59 (1940), 86. (E. G. V.)

Perfumery—New Substance for. Most unsaturated cyclic ketones react weakly with ethyl chloracetate in presence of sodium alcoholate; 1,1,4-trimethyl cycloheptene-3-one-5 is stated to have proved an exception, and to be easily reacted with an alkaline alcoholate to give a glycerin ester that can be saponified to an acid, and the acid then deprived of a carboxyl group to provide the desired aldehyde. The method of preparation proposed is to add a mixture of 32 Gm. of 1,1,4-trimethyl cycloheptene-3-one-5 and 39.4 Gm. of ethyl chloracetate, drop by drop and under constant agitation, to a solution of 23.1 Gm. of sodium methylate in 100 Gm. of benzene. The methylate solution is chilled to 10° C. and the ketone and chloracetate mixture are at a temperature not exceeding 20° C. The mixture is allowed to stand for twenty-four hours and neutralized with acetic acid. The ester can be removed by any usual process, and is found to have a boiling point of 124° C. at a pressure of 4 mm. of mercury. Its composition for the formula $C_{14}H_{22}O_3$ is calculated to give C = 70.54% and H = 9.31%; analysis gives C = 70.48% and H = 9.39%. Mix 36 Gm. of this ester with 20 Gm. of potassium hydroxide in 50% solution and 60 cc. of water, and the mixture is warmed to 30° C. Then 13 Gm. of oxalic acid is added and warming in a water bath is continued until the reaction no longer gives off carbon dioxide. The aldehyde can be removed from the remaining solution by means of a steam current. Its formula is given.—Anon. *Chemist and Druggist*, 133 (1940), 58. (A. C. DeD.)

Permanent Waving—Sulfites Used in. The value of sulfites is primarily due to the sulfur dioxide content. Common sulfites, their SO_2 content and waving utility, respectively, are: potassium sulfite, 33%, excellent; sodium sulfite, 25% (anhydrous 51%), excellent; ammonium sulfite, 48%, good; potassium metabisulfite, 58%, excellent; monoethanolamine sulfite (60% sol.), 19%, excellent; triethanolamine sulfite (60% sol.), 11%, fair; morpholine sulfite, 25%, good.—M. G. deNavarre. *Am. Perfumer*, 41 (1940), No. 5, 37. (G. W. F.)

Polysulfide Fungicides. The product consists of polysulfides dissolved in water at the time of use.—F. Lienart. Belg. pat. 433,243, April 29, 1939. (A. P.-C.)

Saponaceous Shaving Composition. Use is made (suitably with various admixtures) of a hemostatic lipoid-soluble substance drived from soy beans by treating them with petroleum ether, ether, benzin or benzene, adding ethanol or acetone to the resulting solution, and recovering the lipoid-soluble substance from the resulting materials, as by dissolving and reprecipitation.—Hugo Kröper and Erich Thomae, assignors to Chemische Fabrik Promonta G. m. b. H. U. S. pat. 2,185,255, Jan. 2, 1940. (A. P.-C.)

Sodium Silicate as an Inhibitor. A minute quantity of sodium silicate (0.1%) in shaving cream, tooth paste, etc., acts as a protective agent in preventing irritation of the skin due to free alkali.—P. I. Smith. *Am. Perfumer*, 41 (1940), No. 5, 36. (G. W. F.)

Sunburn and Suntan. A discussion dealing particularly with screening compounds.—Joseph Kalish. *Drug and Cosmetic Ind.*, 48 (1941), 158–160. (H. M. B.)

Synthetics Used in Perfumery. A résumé covering the derivation, properties and uses of most commonly used synthetics together with structural formulas.—C. F. H. Allen. *Am. Perfumer*, 41 (1940), No. 5, 25–27; 78. (G. W. F.)

Zinc Dust in Pharmaceutical Preparations. A review of its uses.—A. Foulon. *Wien. Pharm. Wochschr.*, 74 (1941), 2–3. (H. M. B.)

PHARMACOLOGY, TOXICOLOGY AND THERAPEUTICS

Pharmacology

Acetylcholine—Effect of, on the Epinephrine Output in Cats. In the cat under dial, the cava pocket was prepared by excluding the abdominal viscera and atropine was given. Acetylcholine was injected in the central end of the coliac artery in the

doses of 0.4–1 mg. per kilo of body weight. Epinephrine was measured by means of the rabbit intestine segment. In all cases acetylcholine accelerated the epinephrine output rate and, in fact, by 2–8 times.—Y. TANEITI. *Tôhoku J. Exp. Med.*, 38 (1940), 147. (A. C. DeD.)

Adrenal Cortex—Influence of Amorphous Fraction from, on Efficiency of Muscle. The amorphous fraction is highly effective in protecting the adrenalectomized rat against a loss of weight. It is the most effective fraction when tested with renal function as a criterion in the adrenalectomized dog. In these respects the compound 17-hydroxy-11-dehydrocorticosterone is ineffective. With respect to muscular work, however, the relationship is reversed. The hydroxydehydrocorticosterone has a marked effect on the ability of the adrenalectomized rat to work during its time of survival. The amorphous compound is far less efficient in that respect. Compounds of highest influence on carbohydrate metabolism have also the greatest effect on muscular activity, and compounds having greatest effect on renal activity have only a slight influence on carbohydrate metabolism.—DWIGHT J. INGLE and EDWARD C. KENDALL. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 602. (A. E. M.)

Adrenaline Oxidation—Some Observations on the Inhibition of. It has been shown previously that an alkaline p_H and certain metallic ions, notably copper and iron, catalyze the oxidation of adrenaline *in vitro*. The fading of its pressor action indicates that adrenaline is likewise rapidly destroyed *in vivo*, probably by oxidation brought about by the specific enzymes existing in the tissue, namely, phenolase and/or amine oxidase. After reviewing the literature concerning these oxidation processes, the authors describe some experiments calculated to elucidate the role of these specific enzymes in this oxidation. Two adrenaline solutions, one containing a small quantity of ephedrine, turned red on the addition of a phenolase preparation and anesthetized dogs receiving these solutions showed a progressive decrease in blood pressure. Identical adrenaline-phenolase mixtures treated with stabilizers as HCN or ascorbic acid, neither of which inactivate amine oxidase, remained colorless and retained the original pressor activity of the adrenaline. This proves that the oxidation was due to phenolase. Ephedrine alone is extremely weak in controlling the oxidation in this system but does appear to lend a synergistic action to HCN in this respect. Ephedrine did, however, retard the oxidation of adrenaline by an amine oxidase. The mechanism by which ephedrine accomplishes this is discussed.—J. C. DAVID, R. KRISHNASWAMI and M. SRINIVASAN. *Indian J. Med. Research*, 27 (1940), 997–1007. (W. T. S.)

Ammi Visnaga. The fruits of this plant have been used in Egypt for kidney stones and urinary calculi; on the basis of animal experimentation, it retards the smooth musculature of the ureters and acts as a diuretic. Since the fruits are confused with those of *A. majus*, pharmacognostical difference are described in detail.—ULRICH WEBER. *Scientia Pharm.*, 11 (1940), 45–47. (H. M. B.)

Analgesic and Vasoconstrictive Dusting Powder. A partially condensed fusible phenol-formaldehyde resin substantially free from the irritating action of free phenol and formaldehyde and from which uncombined phenol and formaldehyde have been expelled is used in finely powdered form (the resin being one capable of being heated without being converted into the final, infusible state).—REINHARD BEUTNER, assignor to PARKE, DAVIS & Co. U. S. pat. 2,185,178, Jan. 2, 1940. (A. P.-C.)

Antipernicious Anemia Principle in the Urine—Excretion of an. Extracts have been prepared from normal male urines and from the urines of treated patients with remitting pernicious anemia which will initiate normal remissions of the disease when given intramuscularly to relapsing patients with pernicious anemia. Similar extracts prepared from the urines of untreated relapsing cases of pernicious anemia did not possess such antipernicious anemia activity when tested clinically. This urinary antipernicious anemic principle although showing a similar clinical action may or may not be identical with the liver principle. This active material is present in the urine in relatively small amounts.—JOHN FREDERICK WILKINSON, LOUIS KLEIN, CHARLES AMOS ASHFORD, TUDOR STANLEY GEORGE JONES, BRIAN RHODERICK SUTTON MAINWARING and FRANCIS XAVIER AYLWARD. *Biochem. J.*, 34 (1940), 698. (F. J. S.)

Atherosclerosis—Experimental, and High Protein Diets. A diet high in soy bean flour diminishes the incidence and degree of experimental sclerosis in rabbits fed cholesterol, while a diet rich in defatted casein augments the degree of sclerosis. Rabbits fed the high protein, defatted casein diet alone may develop atheromatous lesions indistinguishable from those produced by cholesterol.—DOROTHY R. MEEKER and HOMER D. KESTEN. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 543. (A. E. M.)

Atropine and Propivane—Comparative Study of, upon the Gastric Secretion of the Dog. The author showed the difference in action of phenylvalerate-diethylamino-ethanol, the synthetic spasmolytic and atropine upon gastric secretion. Atropine in a spasmolytic dose suppresses motility and secretion at the same time while the amino alcohol synthetic ester affects the secretory function. This constitutes an example of dissociated action of the synthetic spasmolytic upon the various vegetative functions dependent upon the parasympathetic nervous system.—M. HALPERN. *Soc. de Biol.*, (March 16, 1940); through *Presse méd.*, 27–28 (1940), 318. (W. H. H.)

Barbiturates—Intravenous Anesthesia by. The author insists upon the importance of preanesthesia by dilaudid-scopolamine which, administered 1–2 hours before the intervention, permits an important anesthetic economy. Unsuccessful attempts are rare (8% with evipan, 3% with eunarcon), vomiting is rare, pulmonary complications exceptional. The reasons for the preference of eunarcon are as follows: its elimination is more rapid, no trembling during the operation or agitation on awakening and individual variation in dosage is more easily controlled. In this author's work he has found intravenous anesthesia superior to other types.—P. FRATTINI. *Giorn. ital. anestesia analgesia*, 5 (1939), 223; through *Presse méd.*, 31–32 (1940), 38. (W. H. H.)

Benzedrine and Paredrine—Pressor Action of. The marked pressor action of benzedrine and paredrine is due to arteriolar vasoconstriction. They exhibit their usual pressor effects in patients in whom the vasomotor nerves of most of the body have been paralyzed by means of intraspinal nupercaine or novacaine. Hyperventilation with its resultant marked decrease in arterial blood carbon dioxide concentration does not inhibit the pressor action of these drugs.—A. IGLAUER and M. D. ALTSCHULE. *Am. J. Med. Sci.*, 199 (1940), 359–364. (B. H.)

Benzylsulfanilamide—Absorption, Conversion and Therapeutic Action of. Benzylsulfanilamide is converted in the body to sulfanilamide which is maintained at a low but steady concentration in the blood. The therapeutic activity of the drug is due to the sulfanilamide produced.—G. V. JAMES and A. T. FULLER. *Biochem. J.*, 34 (1940), 648. (F. J. S.)

Bile Salts—Role Played by, in the Absorption of Vitamins. For the maintenance of health, adequate amounts of the vitamins must be present in the diet in an available form. Bile salts are essential to their normal absorption from the intestine. Liver damage impairs the usefulness of some of the vitamins and the amount of vitamins required varies with the physiological conditions such as hyperthyroidism. The onset of deficiency symptoms will depend on the size of the body stores. Vitamins A, D and E are stored in large amounts in the body even in the presence of liver damage and large excesses are usually available to tide the individual over a crucial period. This is not the case with vitamin K. It is absorbed through the agency of bile salts and in jaundice the available supply is cut off. In animal experiments it was shown that bile salts also played an essential part in the intestinal absorption of vitamins D, E and B-carotene. The effectiveness of the fat-soluble factors is markedly altered by damage to the liver.—J. D. GREAVES. *Bull. St. Louis Med. Soc.*, 34 (1939), 85; through *Abbott Abstract Service*, (1941), No. 785. (F. J. S.)

Biological Assay—Quantitative Aspects of. Factors which characterize good assay procedure are enumerated and discussed. Discussion includes considerable detail as well as tables and graphs illustrating the point under discussion. Assays may be classified under three headings: those based on all-or-none reaction; those based on reaction time; and those depending on a graded response. Each of these is discussed and examples given.—C. I. BLISS. *Jour. A. Ph. A.*, 29 (1940), 465. (Z. M. C.)

Camphorquinone—Reduction of, in Presence of Methylamine. 2-Hydroxy-3-Methylaminocamphanes and Their Pharmacodynamic Properties. Camphorquinone is reduced by molecular hydrogen in presence of methylamine and platinum oxide. There are thus obtained two stereoisomeric 2-hydroxy-3-methylaminocamphanes, which are a 3-methylamino borneol and a 3-methylamino isoborneol, respectively. Both exert a powerful physiological action on the respiratory centers. The toxicity of the 3-methylamino borneol is ten times greater than that of its isomer.—F. P. MAZZA and C. MIGLIARDI. *Ber. deut. chem. Ges.*, 72 (1939), 689–693; through *Chimie & Industrie*, 43 (1940), 320. (A. P.-C.)

Cobra Vemon in Arthralgias. Cobra venom has been used for relief of pain in neuralgias and various rheumatic diseases. Cobra venom was used in a study of sixty-five patients suffering various types of arthralgias. Thirty-six received saline solutions two to five times a week; sixty-one were treated with cobra venom intramuscularly at similar intervals. There was slight relief of pain in 59% of those receiving venom, the rest failed to respond. Cobra venom seems to offer some supplementary analgesic effect. Its action is central, similar to that of morphine. Its therapeutic value in rheumatic conditions requires further investigation on a larger series. —OTTO STEINBROCKER, *et al. J. Am. Med. Assoc.*, 114 (1940), 318. (G. S. G.)

2,2′-Diamino-1,1′-Dinaphthyl Hydrochloride. New Local Anesthetic. This compound exerts a strong local anesthetic action. A dilution of 1:2000 is sufficient to cause complete anesthesia of the rabbit cornea and the frog skin. It is very toxic. Intravenously it readily causes the death of small animals. Its action is generally hypothermic and vasodilatative, but it has the drawback of irritating the cells on account of the acid reaction of its aqueous solution.—J. V. SUPNIEWSKI and M. GAJEWSKA. *Acta Polon. Pharm.*, 3 (1939), 97–108; through *Chimie & Industrie*, 43 (1940), 496. (A. P.-C.)

"Doping" in Athletic Test. This report is based on a review of this subject by Bøje (*League of Nations Bull. Health Organization*, 8 (1939), 439). The author discusses the use and abuse of such stimultants as carbohydrates, lecithin, vitamins, phosphates, NaCl, alkalies, NH_4Cl, O_2, light rays, alcohol, ammonia, cocaine, purines, benzedrine, digitalis, nitroglycerine, coramine, cardiazol and hormones, all of which have been used for the above purpose.—E. S. PHIPSON. *Indian Med. Gaz.*, 75 (1940), 484–486. (W. T. S.)

Drugs—Responses of the Isolated Radial Longitudinal Muscle of Stichopus Californicus to. This muscle of the sea cucumber exhibited in a general way the properties of smooth muscle. It showed rhythmic contractions, which were, however, very slow and varied widely from specimen to specimen. The response of the muscle to an electrical stimulus was much slower than that of the frog gastrocnemius but more rapid than that of vertebrate smooth muscle. It responded typically to the usual drugs which affect smooth muscle.—TOM T. IRIYE and JAMES M. DILLE. *Pharm. Arch.*, 11 (1940), 93–96. (H. M. B.)

Estradiol—17-Monocaprylic Ester of. Highly Active Tumorigenic Estrogen. The conjunctive tumorigenic action of α-estradiol is so greatly enhanced by esterification with caprylic acid at position 17 that under certain timing conditions it becomes 100 to 200 times greater than that of the free α-estradiol. With 38 injections of the caprylate given in the course of three months and equivalent to a total of 76 γ of estradiol, typical experimental abdominal fibroids can be induced.—ALEXANDER KIPSCHÜTZ, LUIS VARGAS, JR., HERNÁN BAEZA-ROSALES and HERNÁN BAEZA-HERRERA. *Proc. Soc. Exptl. Biol. Med.*, 46 (1941), 76. (A. E. M.)

Ethylaminobenzoate—Emulsions of, as Topical Anesthetics. By a suitably fine dispersion in water benzocaine can be rendered efficacious as a topical anesthetic, to a higher degree than when powdered on the mucous membrane in pure form, or when dissolved in oil, or when rendered water soluble as a diethylamino compound (procaine).—R. BEUTNER and K. R. BEUTNER. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 337. (A. E. M.)

Evipan in Gynecology. For anesthesia of short duration, evipan is best because it is very easily handled and without much danger. The technique is very easy and simple. It gives a remarkable abdominal silence which in gynecology is greatly desired. It produces insensible and progressive sleep, absence of pain sensations, which are particularly appreciated, and preoperative excitation and agitation. Evipan in the great majority of cases does not permit painful awakening, vomiting or postoperative preliminary complications. However it is necessary to exercise caution in the employment of this anesthetic in certain diseases so as to find the optimal dose.—P. MADILHAC. *Presse méd.*, 22–23 (1940), 252. (W. H. H.)

Extract of Male Fern—Dosage and Action of. The author presents a short discussion on the modes of administration and the action of extract of male fern.—H. LEHMANN. *Pharm. Acta Helv.*, 14 (1939), 21–22. (M. F. W. D.)

Fluorine Derivatives—Estrogenic Action of. Fluorine derivatives were compared with diphenyl and found much less active estrogenically. The tests indicate that the presence of the pentagonal nucleus of fluorine has an unfavorable influence on the estrogenic effect. Castrated rats were the test animals.—ARMANDO NOVELLI and MARCELO H. GIUNTI. *Rev. facultad cienc. quím.*, 14 (1939), 87. (G. S. G.)

Folinerin—Pharmacodynamic Action of. Folinerin is a glucoside obtained in pure crystalline form

from the leaves of adelpha or laurel rose, of the family of *Apocynaceæ*. Its activity was tested on the toad's heart (*Bufo arenarum*). In general its cardiotoxic and cardiodynamic action is similar to that of the digitalis glucosides. Small and moderate doses increase systolic contraction and extend the diastole; it diminishes frequency of rhythm and excitability. Large doses after a period of complete arrhythmia end by holding the heart in systole (toxic phase). Its effect seems midway between that of digitalis and of strophanthin, and it is difficult to obtain cumulative effects. It requires a massive dose to produce systolic stoppage.—ENRIQUE CARLOS BALDASSARRE. *Rev. facultad cienc. quím.*, 14 (1939), 71. (G. S. G.)

N-Furfurylmorpholine Methiodide, Etc. Various details are given of the preparation of intermediates and final products stimulative to the parasympathetic nervous system, such as N-furfurylmorpholine methiodide and other alkyl halides in which the alkyl group is ethyl, propyl, isopropyl, butyl and amyl groups.—FRED P. NABENHAUER, assignor to SMITH, KLINE & FRENCH LABS. U. S. pat. 2,185,219, Jan. 2, 1940. (A. P.-C.)

Grape Juice—Pasteurized, Effect of, on the Functioning of the Gastric Glands. Pasteurized grape juice exerts an independent exciting action on the gastric glands of the dog, especially at large doses of the order of 7 cc. per Kg. body weight. At small doses (3.5 cc.), however, administered with meat, they have but little effect on the secretion of these glands. The exciting effect of pasteurized grape juice is due to its constituents as a whole, not merely to the sugar.—A. V. DYAKONOV, M. N. LIVSHUTZ, Z. EPSTEIN and V. IA. VLADIMIROV. *Voprosy Pitaniya*, 7 (1939), No. 6, 37–47; through *Chimie & Industrie*, 42 (1939), 1068. (A. P.-C.)

Histaminase—Ineffectiveness of, in Anaphylactic Shock in Guinea Pigs. The protective action of histaminase on anaphylactic shock as reported by Karady and Browne could not be confirmed.—ALFRED A. KNOLL. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 606. (A. E. M.)

Hordenine—Nicotinic Action of, Is Not Suppressed by Introduction of a Second Phenolic Hydroxyl in the Molecule in Meta Position. Numerous experiments with hydroxyhordenine showed that, in spite of its pyrocatechol structure, hydroxyhordenine is not a perfect sympathicomimetic, but, in large doses at least, undoubtedly exerts nicotinic action. The tertiary amine function therefore imparts to the molecule such a strong nicotinic action that the pyrocatechol nucleus alone cannot mask it. To obtain a compound having a sympathicomimetic action free from any nicotinic action an alcoholic hydroxyl group must be present in α-position in the side chain, in addition to the two phenolic hydroxyls in 3- and 4-positions.—RAYMOND-HAMET. *Compt. rend.*, 209 (1939), 67–69; through *Chimie & Industrie*, 43 (1940), 411. (A. P.-C.)

Iodine Derivatives—Pharmacodynamic Study of. Di-iodotriethylamine, propanol, iodomethylaminoform with sodium iodide were tested subcutaneously on dogs. The amount of iodine eliminated was recorded. Iodine compounds of fatty acids were also studied. All were tabulated for reabsorption, elimination and their value as urinary antiseptics.—ORSINI F. F. NICOLA. *Rev. facultad cienc. quím.*, 14 (1939), 91. (G. S. G.)

Lanatoside C, Digoxin and Digoxigenin—Fate of the Lethal Effect of Sublethal Doses of. The lethal effect of lanatoside C dissipates rapidly during the first 24 hours after intravenous injection in the cat. The lethality of digoxin actually increases during the first three hours and is still quite strong after 24 hours. This qualitative difference between the action of the genuine glucoside and the product of its partial hydrolysis has not been noted before. The effect of digoxigenin completely disappears in 24 hours. After three hours, digoxigenin causes an increased tolerance for ouabain.—ARTHUR C. DEGRAFF and ROBERT A. LEHMAN. *Proc. Soc. Exptl. biol. Med.*, 45 (1940), 323. (A. E. M.)

Manila Hemp—Leaves of, Diuretic Principle in. An infusion of leaves of Manila hemp is an old diuretic remedy. Pharmacodynamic studies with a fluidextract of the leaves prove its value as a diuretic. Further study was made to determine the diuretic value, if any, of fractionations of the extract. Such studies were made on several crystallized fractions and the conclusion was that the diuretic action of Manila hemp leaves is due to an active principle perseitol. Its activity equals that of theobromine but has no toxic manifestations.—JOAO CHRISTOVAM CARDOSO. *Gaz. Farm.*, 9 (April 1940), 20. (G. S. G.)

Medicinal Compositions Suitable for Application to the Nasal Mucous Membrane. A medicinal composition for stimulating peripheral neuromuscular mechanisms under control of the sympathetic nervous system comprises a stable non-toxic, soluble, acid addition salt of 1-(parahydroxyphenyl)-2-aminopropane such as the hydrobromide together with an excipient.—GORDON A. ALLES. U. S. pat. 2,181,845, Nov. 28, 1939. (A. P.-C.)

Medicine for Application to Mucosal Membranes Such as Those of Nose or Eye. A medicinal agent for administration by application to mucosal membranes to stimulate peripheral neuromuscular mechanisms under control of the sympathetic nervous system comprises 1-(*p*-hydroxyphenyl)-2-aminopropane acid tartrate suitably extended by association with an excipient adapting it for application to mucosal membranes, such as water.—GORDON A. ALLES. U. S. pat. 2,185,824, Jan. 2, 1940. (A. P.-C.)

Metrazol—Preliminary Report on the Elimination of. Results which are in accord with those reported on rabbits by Tatum and Kozelka (*J. Am. Soc. Pharmacol. Expt. Therap. Proceedings*, 69 (1940), 306) indicate that metrazol is detoxified in cats and not excreted. The liver plays an important part in this detoxification.—JAMES M. DILLE and VICTOR P. SEEBERG. *Pharm. Arch.*, 12 (1941), 9–11. (H. M. B.)

Nostal and Pentobarbital—Influence of Sex Life upon Resistance to. Experimental work is reported in detail. In general it consisted in administering gradually increasing daily doses until the animals died. Findings are discussed. Various conditions of sex life did not significantly influence recovery time or percentage of delayed deaths. No difference in resistance could be determined in male rats raised under varying conditions of opportunity for copulation or in females caged with males with intercourse established but pregnancy prevented. Resistance was raised in females which were or recently had been pregnant. Young virgin females developed tolerance to sodium pentobarbital ten times more often than older virgins. Small doses of nostal administered at three- to four-day intervals for several weeks prevented delayed deaths from 50 mg./Kg. of nostal which killed 83% of the controls. Similar preliminary treatment with sodium pentobarbital raised the average resistance of virgin female rats only moderately. Conditions of sex life did not alter average percentage weights of thyroid, adrenal or pituitary glands.—HARALD G. O. HOLCK and LEWIS D. FINK. *Jour. A. Ph. A.*, 29 (1940), 475. (Z. M. C.)

***p*-Oxyphenylisopropylmethylamine or Veritol—Study of.** A chemicofunctional study of a new medicament, veritol. Exact discrimination is made between its pharmacodynamic action and that of

hordenine which has the same empiric formula. It is also differentiated from tyramine which has similar pharmacodynamic action.—ROSA C. D'ALESSIO DE CARNEVALE BONINO. *Semana méd.*, 2 (1939), 1314; through *An. Farm. Bioq., Sup.*, 10 (1939), 113. (G. S. G.)

Pantothenic Acid—Curative Effect of, on Adrenal Necrosis. Rats receiving a ration of sucrose 76, casein 18, salts III 4, corn oil 2%, with thiamine chloride, vitamin B_6, riboflavin, nicotinic acid and choline hydrochloride, supplemented by haliver oil, showed a hemorrhagic cortical necrosis of the adrenals after 4 to 6 weeks. This condition was prevented by calcium pantothenate. Choline aggravated the condition. Autoclaved liver extract served as a prophylactic.—R. C. MILLS, J. H. SHAW, C. A. ELVEHJEM and P. H. PHILLIPS. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 482. (A. E. M.)

Pentothal and Thioethamyl—Comparative Depressant Action of. The depressant effect of thioethamyl is about of the same order as that of pentothal. This equality refers to the depressant effects on spinal cord reflexes, skeletal muscle, heart, respiration, small intestine uterus and urine formation.—ELDON M. BOYD. *Proc. Soc. Exptl. Biol. Med.*, 46 (1941), 98. (A. E. M.)

Pentothal Sodium—Advantages of, in Anesthesia. There is a very great appeal in the use of intravenous anesthesia. Pentothal sodium was used in some 16,500 operations at the Mayo clinic and has fulfilled some of the requirements desirable in a good anesthetic agent for intravenous use, namely brevity of action together with sufficient potency to produce surgical anesthesia without causing severe or prolonged respiratory depression. The drug was found to be particularly useful for old persons. A 2.5% solution was used. Five to ten cc. of the solution may be administered to induce anesthesia which may then be maintained by any inhalation anesthetic. In the presence of hypertension, pentothal tends either to lower the blood pressure or at least to prevent the marked elevation so often observed. It is inadvisable to use the drug in children under ten years of age; in patients who have cardiac decompensation plus dyspnea; in cases of marked liver damage and in the presence of marked hypotension.—J. S. LUNDY and R. C. ADAMS. *Anesthesiology*, 145 (1940), 52; through *Abbott Abstract Service*, (1941), No. 780. (F. J. S.)

Perspiration Accelerators for Application to the Skin. The product consists of 45% to 70% of a mineral oil, 13% to 25% of petrolatum and 20% to 35% of waxes such as paraffin, sperniaceti, ozocerite or beeswax.—EDWARD E. HENDERSON and DAVID O. MEEKER, assignors to CUTASY LABORATORIES, INC. U. S. pat. 2,180,280, Nov. 14, 1939. (A. P.-C.)

Phosphatides—Formation of, in the Organism under Normal and Pathological Conditions. The relative speed of formation of lecithin and cephalin in various organs of normal and partially hepatectomized animals was examined by means of the radioactive phosphorus isotope. The removal of part of the liver produced a considerable disturbance of phosphatide metabolism. Some of the biological implications of the findings are discussed.—ERWIN CHARGAFF, KENNETH B. OLSON and PHILIP F. PARTINGTON. *J. Biol. Chem.*, 134 (1940), 505. (F. J. S.)

2-(Piperidinomethyl)cyclopentanol and of 2-(Dimethylaminomethyl) cyclopentanol — Stereoisomeric Forms of. Whereas the racemic isomers of 2-(piperidinomethyl) cyclopentanol both possess a high anesthetizing power, the corresponding esters of 2-(dimethylaminomethyl) cyclopentanol behave differently, only the β-form possessing a high anesthetizing power.—C. MANNICH and P. SCHALLER. *Arch. Pharmazie*, 276 (1938), 575–582; through *Chimie & Industrie*, 42 (1939), 857. (A. P.-C.)

Pitressin—Activation of, by Acetic Acid. Pitressin, when boiled with acetic acid, becomes more potent as shown by subcutaneous antidiuretic assay and intravenous pressor assay. These effects are not due to boiling, concentration, acidity or the presence of acetate ions.—ERIC OGDEN and LEO A. SAPIRSTEIN. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 573. (A. E. M.)

Posterior Pituitary Extract—Response of Non-Gravid Human Uterus to. The uterine contractions in a series of normal women were recorded with an intra-uterine bag. The reactivity of the uterus to posterior pituitary extract and its fractions was determined by finding the minimal effective doses of these at various stages of the menstrual cycle. The uterus responded to posterior pituitary extract immediately before and during menstruation and in the early interval part of the cycle. The non-gravid human uterus is caused to contract by vasopressin and not at all by oxytocin.—A. MCLELLAN. *Lancet*, 238 (1940), 919. (W. H. H.)

Pregneninolone (17-Ethinyl Testosterone)—Biological Properties of, in Women. Pregneninolone does not manifest in women the same multiplicity of biological properties as it does in experimental animals. Its most striking property is its progestomimetic effect on the estrogen-primed endometrium, when administered orally. It has no estrin-like effect on the endometrium and only a slight effect on the vaginal epithelium if given in very large doses; neither has it arrhenomimetic effects. The physiologic changes caused by the introduction of the ethinyl group at the 17th atom of the testosterone molecule are emphasized. The effects produced in experimental animals are fundamentally different from those obtained in humans.—UDALL J. SALMON and SAMUEL H. GEIST. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 522. (A. E. M.)

Prolactin and the Gonadotrophic Substance of Pregnant Mares Serum—International Standards for. Standards are dispensed in the form of tablets, each tablet containing 100 I. U.—ANON. *Chemistry and Industry*, 58 (1939), 1050. (E. G. V.)

Radioactive Iodine (I'128)—Passage of, in Thyroid of Animal without Hypophysis. The passage of radioactive iodine (I'128) into the thyroid is stimulated by the thyrotropic and hypophyseal hormone.—C. P. LEBLOND, P. SUE and A. CHANORRO. *Soc. de Biol.* (April 6, 1940); through *Presse méd.*, 33–34 (1940), 372. (W. H. H.)

Renal Extracts—Preparation of, Capable of Reducing the Blood Pressure of Animals with Experimental Renal Hypertension. A method is described for the preparation of renal extracts which are capable of reducing the blood pressure of animals with experimental hypertension. The active principle is non-protein in nature, water-soluble and is effective when administered orally. Its behavior is unlike that of any of the known non-specific depressor substances present in organ extracts. The latter are for the most part ineffective when administered orally and even such effects as are obtainable following parenteral injection are only of brief duration. Its solubility in water but insolubility in organic solvents also sharply differentiates the effective principle from many well-known non-specific depressor substances present in tissue extracts.—ARTHUR GROLLMAN, J. R. WILLIAMS, JR., and TINSLEY R. HARRISON. *J. Biol. Chem.*, 134 (1940), 115. (F. J. S.)

Rhenium Compounds—Physiological Studies of. Rhenium is of low toxicity and general inertness in the body. The lethal dose for rats is 900–1000

mg. per Kg. of body weight. It causes transitory changes in blood pressure and in large doses convulsions resembling those caused by strychnine, suggesting a high selectivity of the spinal cord for the metal.—FRANK MARESH, M. J. LUSTOK and P. P. COHEN. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 576. (A. E. M.)

Rice Factor—Identification of the. Glycine is required in the diet for optimum growth of the chick. When adequate glycine is present in the diet, chondroitin has a growth-promoting action on the chick. A combination of glycine and chondroitin can replace the rice factor.—H. J. ALMQUIST, E. L. R. STOKSTAD, E. MECCHI and P. D. V. MANNING. *J. Biol. Chem.*, 134 (1940), 213. (F. J. S.)

"Senso" (Chinese Drug from Dried Frog Skin Secretion)—Pharmacological Studies of. V. Cinobufagin, Cinobufotalin and Cinobufotalidin.—YOSITO KOBAYASI. *Proc. Imp. Acad.* (Tokyo), 15 (1939), 326; through *Chem. Abstr.*, 34 (1940), 4234. (F. J. S.)

Silicic Acid and Silicic Acid Drugs—Diuretic Experiments with, on Rats. Experiments are reported involving among other things the application to rats of aqueous extracts of *Herba equisetum* and *Herba pulmonariæ*. The results on diuresis observed by the present authors and by previous workers are somewhat contradictory and deserve further investigation. Experiments with organic and inorganic silicic acid solutions and suspensions have shown that no increase in diuresis is observable with rats.—R. JARETZKY, K. BREITWIESER and F. NEUWALD. *Arch. Pharmazie*, 276 (1938), 552–559; through *Chimie & Industrie*, 42 (1939), 852. (A. P.-C.)

Sodium Evipan—1500 Anesthesias with Intravenous. The author has given 1500 intravenous sodium evipan anesthesias without death. The author insists upon injecting an individual dose slowly because of the impossibility of determining in advance the results to be expected. He gives, one hour before the intervention, atropine-morphine which procures a more prolonged and calm anesthesia. Evipan, which in a surgical dose, does not act upon the circulation, sometimes produces respiratory syncopes where it is necessary to employ lobeline or artificial respiration. Evipan is contraindicated in diseases of the liver.—A. BOTTO MICCA. *Giorn. ital. anestesia analgesia*, 5 (1939), 165; through *Presse méd.*, 31–32 (1940), 38. (W. H. H.)

***d*-Sorbitol—Metabolism of.** Glycogen formation was not observed when sorbitol was fed to rats after the customary fasting period of twenty-four hours. It is questionable whether utilization occurred when the animals fasted forty-six hours and were given larger quantities of the alcohol over a longer period of time. The inability to form glycogen under these circumstances is probably dependent upon the low rate of absorption of sorbitol from the gastrointestinal tract.—N. R. BLATHERWICK, PHOEBE J. BRADSHAW, MARY E. EWING, HARDY W. LARSON and SUSAN D. SAWYER. *J. Bio. Chem.*, 134 (1940), 549. (F. J. S.)

Stilbestrol—Tumorigenic Powers of. The authors' former statement (Lipschütz and Vargas, 1940) that stilbestrol can provoke in the guinea pig, when subjected to a prolonged treatment with subcutaneous injections of this substance, the same fibrous tumoral reaction as can the natural or esterified hormones is fully corroborated by new experiments. This tumorigenic action of stilbestrol is much greater than that of the natural hormones (estradiol and estrone) when equal quantities are compared. The tumorigenic action of small doses of stilbestrol is less than that of similar doses of esterified estradiol; but with greater doses the tumorigenic action of stilbestrol equals that of similar doses of certain esters of estradiol (monobenzoate and dipropionate). This is all the more significant because the hysterotrophic dose of the esters of estradiol is much smaller than that of stilbestrol. The guinea-pig uterus increases beyond the normal weight more rapidly with stilbestrol than with the free natural hormones. This is tentatively explained by an inability of the organism to inactivate stilbestrol as rapidly and effectively as estradiol and estriol. Loss of blood from the genital tract in the guinea pig treated with stilbestrol is commoner than with the natural hormones but as common as with similar quantities of the esterified hormones. This is considered to be a sign of a greater toxicity of stilbestrol as compared with the natural hormones.—A. LIPSCHÜTZ and L. VARGAS. *Lancet*, 238 (1940), 541. (W. H. H.)

Sulfadiazine—Absorption and Excretion of. Sulfadiazine was rapidly absorbed into the blood stream and comparatively high levels were reached. The proportion of conjugated sulfathiazine in the blood was small. The blood levels fall rather slowly after the drug is discontinued. Excretion takes place through the kidney. In four patients given 2-Gm. of the drug and in eight patients given a total from 7 to 16-Gm. the only toxic reaction noted was a morbilliform rash in one case of the latter group.—NORMAN PLUMMER and HERBERT K. ENSWORTH. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 734. (A. E. M.)

Sulfanilamide—Effect of Administration of an Acetate on the Detoxication and Therapeutic Activity of. II. Both sulfanilamide and sulfapyridine have been found to be toxic due to withdrawal of acetate precursors and the lowering of the carbon dioxide capacity of the blood. Acetate given at the same time rectifies this defect. Acetylsulfanilamide evidently exerts a specific toxic effect although it must also have some effect on the respiratory center on account of the fall of carbon dioxide.—G. V. JAMES. *Biochem. J.*, 34 (1940), 633. (F. J. S.)

Sulfapyridine—Enchancement of Certain Toxic Effects of Codeine and Morphine by. The effect of codeine and morphine is enhanced by sulfapyridine. The increased activity of the drugs becomes evident in the prolongation of their action and also in the intensity of their effects and in the increase of toxicity.—SUSI GLAUBACH. *Proc. Soc. Exptl. Biol. Med.* 46 (1941), 53. (A. E. M.)

Sulfathiazole—Observations on the Pharmacology and Toxicology of, in Man. The behavior of sulfathiazole has been investigated in nine convalescent patients serving as controls and in eighty-three patients suffering from pneumonia. Sulfathiazole is rapidly excreted in the urine. Following intravenous administration of the sodium salt, recovery of the sulfathiazole in the urine is practically quantitative. It is not readily absorbed from the rectum. The proportion of the drug conjugated is low in most individuals. Effects observed on renal function and the hemopoietic system were transitory and not pronounced.—J. G. REIVHOLD, H. F. FLIPPIN and L. SCHIVARTZ. *Am. J. Med. Sci.*, 199 (1940), 393–401. (B. H.)

Sulfonamide—Reaction to Chilling as an Index of Tolerance for Ingested, in the Rabbit. Sulfanilamide, sulfapyridine and sulfathiazole produced a lengthening of the warming time in the rabbit, roughly proportional to the amount fed and the bood level reached. Serious lengthening (over 60%) occurred to an extent paralleling the incidence of rapid weight loss and death.—ARTHUR LOCKE, ROSE B. LOCKE and HELEN SCHLESINGER. *Proc. Soc. Esptl. Biol. Med.*, 46 (1941), 79. (A. E. M.)

Testicular Diffusing Factor—Biological Assay of. A method is described for comparing the diffusing factor activities of pairs of preparations, with an estimate of the error of comparison, by measurement

of the mean bleb size produced in suitable rabbits, followed by the construction for each assay of a response-log dose curve by the method of least squares and calculation of the fiducial limits of the derived potency ratio of the preparations. The error is no greater than that found in other biological assays carried out and evaluated on comparable lines.—ALFRED LOUIS BACHARACH, MICHAEL ROBIN ALEXANDER CHANCE and THOMAS RIDDOCH MIDDLETON. *Biochem. J.*, 34 (1940), 1464. (F. J. S.)

Testosterone Propionate Plus Bile Acids—Oral Effectiveness of. Desoxycholic acid does not enhance the oral effectiveness of testosterone propionate in the rat.—J. A. WELLS, M. W. BURRILL and R. R. GREENE. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 452. (A. E. M.)

Tetra - Sodium - 2 - Methyl - 1,4 - Naphthohydroquinone Diphosphoric Acid Ester and Other Naphthoquinone Derivatives—Antihemorrhagic Activity of. The CD_{50} (Thayer-Doisy Unit) by subcutaneous administration of tetra-sodium-methyl-naphthohydroquinone diphosphoric acid ester is 1.34 gamma. The subcutaneous CD_{50} of methyl-naphthoquinone is 0.64 gamma. The ratio of these potencies is 0.48 but on a molecular basis allowing for six molecules of water of crystallization the phosphoric ester is 50% more potent than the methyl-naphthoquinone. Five naphthoquinone derivatives not reported hitherto are shown to be inactive in doses from 200 to 1000 gammas.—J. LEE, U. V. SOLMSSEN, A. STEYERMARK and R. H. K. FOSTER. *Proc. Soc Exptl. Biol. Med.*, 45 (1940), 407. (A. E. M.)

Tetra - Sodium - 2 - Methyl - 1,4 - Naphthohydroquinone Diphosphoric Acid Ester—Pharmacological Observations on. A variety of toxic symptoms at high dosages was observed. However, the safety margin of the antihemorrhagic effect is enormous. —R. H. K. FOSTER. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 412. (A. E. M.)

Therapeutics—Recent Developments in. IX. Anticoagulants. The coagulation of the blood, saline anticoagulants, heparin, heparin in transfusions and other anticoagulants are discussed.—F. PRESCOTT. *Chemist and Druggist*, 133 (1940), 294. (A. C. DeD.)

Thiazoles, Oxazoles and Imidazoles—Local Anesthetic Action of. Forty derivatives of 2-aminobenzothiazole (I), 2-phenylamino-4,5-dihydrothiazole (II), 2-phenylamino-4,5-dihydroöxazole (III) and 1-phenyl-imidazole (IV) have been studied pharmacologically and all are found to be local anesthetics. The lengthening of the alkoxy group at carbon number 6 in the molecule of I is followed by an increase in surface anesthesia and toxicity; and the alkyl substitution on amino N reduces the surface anesthesia and toxicity. Three compounds show marked hypnotic action in addition to local anesthesia. The lengthening of the alkoxy group at the *p* position of II is accompanied by an increase in surface anesthesia and toxicity; infiltration anesthesia and irritation tend to move in the same direction. Replacement of the *p* position by a hydroxyl abolishes surface but not infiltration anesthesia; the mono-halogenated compounds have also a hypnotic action. 2-(*p*-CH_3O-phenylamino)-4,5-dihydrothiazole has been studied in men as a representative member of the above series and a 1% solution produces satisfactory surgical anesthesia with ease of decomposition and relatively high toxicity by subcutaneous injection. Of two derivatives of III and three of IV, one compound, 1-(*p*-CH_3O-phenyl) imidazole, has no surface anesthesia while the remaining compounds are active, both by injection and instillation to the rabbit's eye sac.—CHARLES L. ROSE, HORACE A. SHONLE and K. K. CHEN. *Pharm. Arch.*, 11 (1940), 81–89. (H. M. B.)

α-Tocopherol and Testosterone—Creatine-Creatinine Excretion in Neuromuscular Diseases Treated with. Neither α-tocopherol nor testosterone propionate had any effect on the creatine-creatinine excretion in the cases of amyotonia congenita and progressive muscular dystrophy. This is not to be interpreted as a failure of both substances as therapeutic agents. It indicates, however, that α-tocopherol does not have the same inhibitory effect on creatinuria in neuromuscular disturbances in human beings as in the nutritional muscular dystrophy in rabbits.—WALTER FLEISCHMANN. *Proc. Soc. Exptl. Biol. Med.*, 46 (1941), 94. (A. E. M.)

α-Tocopherol—Lower Homologs of. In β-tocopherol (dimethyltycol) the two methyl groups are in positions 5 and 8 in the aromatic nucleus. From the standpoint of vitamin E potency, maximum effect is governed by the presence of three methyl groups (α-tocopherol); with two methyl groups there is still an appreciable therapeutic action, but the doses required are 3 or 4 times greater; with only one methyl group there is no vitamin E effect. —P. KARRER and H. FRITZSCHE. *Helv. Chim. Acta*, 22 (1939), 260–263; through *Chimie & Industrie*, 42 (1939), 678–679. (A. P.-C.)

Urine Diastase Content of Rabbit. The author observed a very remarkable decrease of the diastase content in rabbits' urine on a subcutaneous administration of morphine hydrochloride and considered on the basis of this result that the repressive secretory center of external secretion of the pancreas would most likely lie in the brain, the cerebrum probably.—S. SATO. *Tôhoku J. Exp. Med.*, 38 (1940), 205. (A. C. DeD.)

Uterine Motility—Inhibition of. Corpus luteum hormone inhibits uterine motility but the uteri of certain animals, excised during pseudo and true pregnancy, show contractions and respond to pituitrin. This, and the fact that castration up to mid-pregnancy does not interfere with the pregnancy or parturition in certain animals, indicates that there are agents in the body other than corpus luteum hormones which exert an inhibitory influence on the contractions and on the pituitary reactions of the uterus. In an attempt to find these agents, the authors have tested, *in vivo* and *in vitro*, six hormone substances found in the body, using pregnant, non-pregnant, normal and ovariectomized animals. Injections of antuitrin S, antuitrin, antuitrin G (P., D. & Co.), thyroxine, insulin and vitamin E gave negative results. Antuitrin and antuitrin G were found to be excitatory. Insulin intensified the pituitrin reaction of the pregnant and non-pregnant uterus of the guinea pig. Vitamin E had no influence on uterine motility but promoted the growth of luteal tissue. Adrenaline had an inhibitory effect on the pregnant and non-pregnant uterus of the rat and guinea pig. Thymol, tested because it is used as a preservative in commercial corpus luteum preparations, had an inhibitory influence as did certain other chemicals as acetone, ethyl alcohol.—B. T. KRISHNAN. *Indian J. Med. Research*, 28 (1940), 241–247. (W. T. S.)

Viper Venom (Vipera Aspis)—Role of Copper in Attenuation of, by Hydrogen Peroxide. Snake venom mixed with hydrogen peroxide in varying dilutions (made from ordinary distilled water), incubated for 20 hours at 37° C. and injected into rabbits proved innocuous. When redistilled water was used the animals died. It was found that in redistillation, copper was removed. Addition of the minimum amount of copper sulfate to the venom-hydrogen peroxide mixture permitted the animals to survive. Copper acts as a catalyst in the attenuation of snake venom.—P. BOQUET. *Compt. rend.* 208 (1939), 770–772; through *Chimie & Industrie*, 42 (1939), 852. (A. P.-C.)

Vitamin A—Influence of Liquid Petrolatum on the Absorption of. Animal experiments have demonstrated that oral ingestion of liquid petrolatum effectively hinders intestinal absorption of carotene and, to a lesser extent, of vitamin A. Similar observations have been made on man. The author's experiments consisted in daily administration of 7000 International Units of vitamin A to human subjects before, during and after the ingestion of liquid petrolatum. In this way it was demonstrated that the oil caused a consistent loss of vitamin A in the feces. The effect is apparently due to the solubility of the vitamin in oil. In a single patient suffering from sprue, the administration of vitamin A was regularly followed by an increase in the amount of the substance excreted in the stools. It is recommended that the liquid petrolatum be used regularly only if the patient's intake of vitamin A is ample; the oil should be given as far as is possible from mealtime and it should be used sparingly, if at all, in patients in whom the alimentary resorption is impaired.—O. ANDERSON. *Acta Paediat.*, 24 (1939), 422; through *Abbott Abstract Service*, (1941), No. 776. (F. J. S.)

TOXICOLOGY

Acidity, Basicity, Solubility and Physiological Effect. The toxicity of free amines toward bacteria is greater than that of their salts. The toxicity of the salts of strongly hydrolyzable amines is therefore due chiefly to the action of the free bases. The tendency to hydrolysis increases as the basicity of the amine decreases, which explains the fact that the toxicity of the salts of certain amines increases as the basicity of the free amine decreases. On the other hand, the toxicity of amines and their hydrochlorides increases regularly as their solubility in water decreases.—K. KINDLER. *Arch. Pharm.*, 277 (1939), 14–25; through *Chimie & Industrie*, 42 (1939), 853. (A. P.-C.)

Antiseptics—Toxicity of. Recent work on the toxicity of germicides suggested that the effect was directed against the humoral in contrast to the cellular elements. Accordingly, the effect of ten germicides on hemolytic complement was tried out, but the results were entirely different from experimental observations on the loss of phagocytic activity. The germicides tested affected the complement responsible for rapid phagocytic activity at concentrations considerably less than those affecting hemolytic complement; for example, four times as much iodine and sixteen times as much mercuric chloride was required to destroy hemolytic complement as was necessary to destroy phagocytic activity. Attempts made to utilize the destruction of hemolytic complement as an indicator of the germicidal effect of toxic substances were not successful and the experiments showed that hemolytic complement, as such, does not act as an accelerator of phagocytosis. —H. WELCH, C. M. BREWER and A. C. HUNTER. *J. Immunol.*, 38 (1940), 273; through *Bull. Hyg.*, 15 (1940), 627. (T. C. G.)

Atropine—Action of, in a Case of Massive Intoxication by Digitalin. The authors relate a tentative suicide by digitalin. The authors have studied the action of atropine upon the electrocardiograph: 1 mg. intravenously exaggerates the negativity of the T wave and provokes a divergence of S and T. In the case of intoxication by digitalin, atropine treatment is not justifiable and it should be controlled by electric examination in series.—G. MARCHAL, P. BRETON and C. BAUGE. *Soc. Franc. de Cardiologie*, (Feb. 18, 1940); through *Presse méd.*, 38–39 (1940), 442. (W. H. H.)

Benzene—Toxicity of. Commercial benzene is more toxic than pure benzene because of the presence of an unidentified impurity, other than thiophene. This impurity tends to concentrate in the fraction boiling between 80.4° and 81.2° C.—P. ANGENOT and R. CHARLIER. *Arch. Maladies Profess.*, 2 (1939), 348–384; through *Chimie & Industrie*, 42 (1939), 809. (A. P.-C.)

Carbon Disulfide—Combating Parasites by Means of. The amount of carbon monoxide formed during disinfection of premises by means of carbon disulfide is small and normally presents no danger to people in the neighborhood. It is therefore unnecessary to take any special precautions against the formation of carbon monoxide.—H. JESSER and E. THOMAE. *Chem.-Ztg.*, 63 (1939), 133; through *Chimie & Industrie*, 42 (1939), 812. (A. P.-C.)

Carbon Disulfide Poisoning—Use of Vitamin B_1 in Neuritis of. During the process of rayon manufacture, the alkalinized cellulose is placed in a revolving churn with a measured amount of carbon disulfide, and the mixture is slowly revolved for two to three hours to form cellulose xanthate. In Turin, there are large factories manufacturing rayon and the authors have frequent occasion to see chronic carbon disulfide poisoning. Some of the symptoms are parkinsonian syndrome, meningeal irritation, psychoses, pyramidal tract symptoms and similar conditions. The most frequent lesion takes place in the peripheral neurons. Many polyneuritides are seen with paralysis and loss of sensation and most of these lesions are seen in the lower limbs. The authors treated two such cases with large doses of thiamine hydrochloride intravenously. Treatment consisted of 10 daily injections of 5000 International Units. Both cases were thought to have improved more rapidly than would have been expected without treatment.—L. BRIGNOLO and R. DIVERSI. *Minerva med.*, 31 (1940), 280; through *Abbott Abstract Service*, (1941), No. 777. (F. J. S.)

Carbon Tetrachloride Fire Extinguishers—Fatal Intoxications Resulting from the Use of. Description of a case in which a workman died 24 days after fighting an oil, petroleum and gasoline fire with carbon tetrachloride. The results of autopsy seemed to indicate that death was not due to carbon monoxide or phosgene, but rather to inhalation of carbon tetrachloride vapors and possibly also to the action of organo-metallic compounds of carbon tetrachloride formed under the action of heat, which are extremely toxic even in minute doses.—G. CASTROVILLI. *Medicina Lavoro*, 30 (1939), 193–206; through *Chimie & Industrie*, 43 (1940), 25. (A. P.-C.)

Chloroform—Liver Injury Due to, Increases as Protein Stores Decrease. Liver injury due to chloroform anesthesia increases in extent as the protein body stores are depleted. In a protein-depleted dog 15 to 20 minutes of chloroform anesthesia is frequently fatal with extensive hyaline liver necrosis and the typical picture of chloroform poisoning. Twelve minutes of chloroform anesthesia in a protein-depleted dog will cause moderately severe liver injury. Control experiments in dogs without protein depletion indicate that 90 minutes of chloroform anesthesia can be tolerated with but little liver injury. The contrast to the non-depleted or anemic dog the urinary creatine does not increase after liver injury in these protein-depleted dogs.—L. L. MILLER and G. H. WHIPPLE. *Am. J. Med. Sci.*, 199 (1940), 204–216. (B. H.)

Chromic Acid Poisoning—Fatal Case of, in a Hospital.—WALTER MEYER. *Wien. Pharm. Wochschr.*, 73 (1940), 270–271. (H. M. B.)

Cinchophen Causing Toxic Hepatitis and Acute Yellow Atrophy. The dangers of cinchophen medication have been repeatedly emphasized. 'Though many people take it without injury, others are definitely allergic to it. One of its dangers lies in delayed

reaction to it. Two cases of liver damage are reported, both resulting from medication with "cold capsules" containing cinchophen, in repeated small doses over several months. In each case allergy is ruled out by the length of time of medication before reaction occurred. The capsules were a compound of guaiacol and cinchophen, which may or may not be more toxic than cinchophen itself. The use of this drug is inadvisable especially in the treatment of such innocuous conditions as the common cold.—CYRIL M. MACBRYDE. *J. Am. Med. Assoc.*, 114 (1940), 316. (G. S. G.)

Hydrogen Cyanide, Chloropicrin and Ethylene Oxide—Toxicity of, to Eggs, Nymphs and Adults of the Bedbug. Eggs of *Cimex lectularius* are more resistant to chloropicrin than the nymphs or adults, the ratio eggs:nymphs:adults at the median lethal concentration being 2.5:1:1.2. For ethylene oxide the egg-nymph-adult ratio is 1.0:5.3:7.4, and for hydrocyanic acid this ratio is 1:3.4:3.5. The similarity in reaction of nymphs and adults to each gas is striking. The toxicity ratios of hydrocyanic acid, chloropicrin and ethylene oxide to the 3 sages of the bedbug are: eggs 1:2.5:48.1; nymphs 1:3.9:5.6; adults 1:5.3:6.6.—H. GUNDERSON and A. I. STRAND. *J. Econ. Entom.*, 32 (1939), 106–110; through *Chimie & Industrie*, 42 (1939), 812. (A. P.-C.)

Karaya Gum—Hypersensitivity to. Karaya gum (Indian gum) has been reported as an allergin and numerous cases of perennial hay fever have been traced to its use. It may be contacted by either ingestion or inhalation. It is used extensively in candies, jellies, ice creams, tooth pastes, hand lotions and wave sets and in many laxatives. The symptoms are mainly atopic coryza, asthma, dermatitis and gastrointestinal distress. Such allergics should avoid its use.—KARL D. FIGLEY. *J. Am. Med. Assoc.*, 114 (1940), 747. (G. S. G.)

Lead Pigments—Use of, in the Leather and Imitation Leather Industries. Use of chrome yellow (lead chromate) instead of cadmium yellow caused saturnism in two unprotected workmen. The pigment was mixed with titanium oxide, lampblack and red ferric oxide. The solvent was a mixture of butyl acetate, alcohol, spirit of turpentine and benzine; nitrocellulose was used as binder. This color, containing 3.54% of lead, was applied by spraying. Recurrence of such accidents can be prevented by the use of lead-free pigments or by the use of so-called "colloid" masks when applying the color.—K. HUMPERDINCK. *Arbeitsschutz*, (1939), 270–271; through *Chimie & Industrie*, 43 (1940), 122. (A. P.-C.)

Lead Poisoning—Study of Bone Marrow in Occupational. A study of a mixture of marrow and blood taken by lumbar puncture on a number of patients suffering from lead poisoning led to the following conclusions: The marrow of individuals suffering from saturnism exhibits a definite erythroblastic trend of the normoblastic type; in no case was the presence of megaloblasts observed; in many cases the erythrocytes contained basophilic elements. The various white elements undergo no change. Hence, bone marrow does not seem to be seriously affected in lead poisoning, and consequently anemia, even if fairly marked, is capable of improvement and even of being cured.—G. MONTEGROSSO. *Medicina Lavoro*, 30 (1939), 1–8; through *Chimie & Industrie*, 42 (1939), 270. (A. P.-C.)

Leguminous Fish Poison Plants—Active Principles of. V. The resin from *D. malaccensis* root has been fractionated by chemical means, and 1-α-toxicarol obtained in a pure condition. In addition rotenone, elliptone, deguelin, malaccol, sumatrol and a new phenol have been isolated. The properties of this phenol, which is isomeric with toxicarol, are discussed and as a working hypothesis an isoflavone structure is suggested. The resin from *T. toxicaria* root has been similarly fractionated, and rotenone, 1-α-toxicarol, and sumatrol isolated.—STANLEY H. HARPER. *J. Chem. Soc.*, (1940), 1178–1184. (W. T. S.)

Manganiferous Dusts—Physiological Experiments on the Modifications Occurring in the Lungs as a Result of Inhalation of. Rabbits and mice were made to inhale pyrolusite dust (containing 80% to 90% of manganese dioxide) and basic slag dust (6% to 7% of manganese) 1 hour a day for 4 weeks. Severe pulmonary lesions of a catarrhal nature, accompanied by bronchitis and broncho-pneumonia, were observed. The metal undoubtedly acts both chemically and mechanically.—REPLOH. *Arbeitsschutz*, (1939), 144–146; through *Chimie & Industrie*, 42 (1939), 810. (A. P.-C.)

Mercurial Poisoning—Acute, after Cystoscopy. Reports are given on three patients who died of mercurial poisoning after cystoscopy in which mercury oxycyanide was used as an antiseptic. In two the diagnosis was made during life and chemical analyses of the urine and feces were made ante mortem and of the organs post mortem. These cases suggested the cause of the death a year previously of a third patient who had died after cystoscopy.—B. H. PAGE and C. WILSON. *Lancet*, 238 (1940), 640. (W. H. H.)

Opium Derivatives—Contact Dermatitis from. Many morphological types of eruption have been produced by the ingestion or parenteral use of opium compounds. Eczematous dermatitis from the use of lotions and suppositories containing opium compounds has also been reported. Opium derivatives are also an occupational hazard for nurses, physicians, pharmacists and workers in manufacturing pharmacy as a cause of contact dermatitis. Several cases are reported.—JAMES W. JORDAN and EARL D. OSBORNE. *J. Am. Med. Assoc.*, 113 (1939), 1955. (G. S. G.)

Picrotoxin—Use of, as an Antidote in Barbiturate Poisoning. A case is reported which the author believes is another proof that picrotoxin favorably influences the outcome of barbiturate poisoning. A twenty-five-year-old man took between six and eight Gm. of phenobarbital, was untreated for fourteen hours and was then found in deep coma. He was treated continuously for seventy-eight hours with a picrotoxin solution given intravenously, this being the only drug used. It was injected after being diluted with 5% glucose in normal saline solution until 1 cc. contained 0.1 mg. of picrotoxin. This solution was given by intravenous drip. Occasionally 250 cc. of 50% sucrose were given in addition. After seventy hours of treatment the patient became quite restless and at the end of seventy-eight hours he was able to talk. Altogether a total of 559 mg. of picrotoxin was given to the patient during the course of treatment and at no time did he have any convulsions nor did he show any fibrillary twitching of the muscles.—E. C. REIFENSTEIN, JR. *N. Y. State J. Med.*, 40 (1940), 1312; through *Abbott Abstract Service*, (1941), No. 807. (F. J. S.)

Red Squill—Study of. Popularity of red squill as a rat poison is due to its being relatively non-toxic to other animals and to human beings. Most rodent poisons are too toxic to all forms of animal life. Its use has been retarded because of the difficulty in getting a uniform preparation. Experimental work covers a histological study, extraction studies and toxicity experiments, potency of various extracts, physiological action of the rat-killing principle on rats and physiological action of the rat-killing principle on the dog. Presence of fragments of red pigmented tissue in the red squill powder was the only diagnostic difference between it and pow-

dered white squill. Eighty per cent ethyl alcohol was used to extract the rat-killing principle. After purification, a dose of 4 mg./Kg. caused death in a male rat.—GUILFORD C. GROSS. *Jour. A. Ph. A.*, 29 (1940), 428. (Z. M. C.)

Rotenone-Containing Plants. Occupational Dermatosis. Handling powdered cube root rapidly produces (2 to 3 days) a violent dermatitis of the genitalia; if the patient is removed from contact with the powder, desquamation takes place in 48 hours and conditions return to normal. Otherwise, the dermatitis increases in severity, without spreading, however, and in none of the observed cases did it change to eczema. Treatment consists in washing with soft water and application of diadermine. Preventively, use the usual methods of ventilation and protect the respiratory organs by wearing a mask and the genitalia by means of appropriate clothing.—J. RACOUCHOT. *Arch. Maladies Profess.*, 2 (1939), 149–151; through *Chimie & Industrie*, 42 (1939), 809. (A. P.-C.)

Saturnism—Influence of Acidosis and Alkalosis on Experimental. Lead poisoning is less serious in animals in a state of acidosis than in those in a state of alkalosis. Elimination of the lead is quicker in the former case and acidosis seems to oppose accumulation of lead in the system.—S. MAUGERI and A. CAPELLINI. *Medicina Lavoro*, 30 (1939), 257–266; through *Chimie & Industrie*, 43 (1940), 122. (A. P.-C.)

Strychnine—Biological Assay of, in Poisoning. In the case of a woman dying in convulsions promptly after taking a quack medicine, the medico-legal report indicated the cause of death as spasmodic asphyxia. Toxicological analyses were made of stomach contents, urine, blood and organs. Chemical tests on these and pharmacological tests on frogs indicated strychnine. Because it was a criminal case, extra careful analysis had to be made to prove that strychnine was present in toxic amount. Pharmacodynamic assay was deemed more accurate than chemical analysis on the cadaver material. Frogs were used as test animals and strychnine sulfate was used for the control. This method determined that an excessive amount of strychnine existed in the gastric contents. This type of test saves time because there is no need to first isolate the poison from the gastric contents as for a chemical analysis.—ROMULO GUEVARA, *et al. Rev. Filipina Med. Farm.*, 30 (1939), 505. (G. S. G.)

Sodium Sulfamethylthiazole—Mechanism of Liver and Kidney Damage Caused by. Degenerative lesions of liver and kidneys following administration of sulfamethylthiazole are explained as a consequence of the damaging effect of high concentrations of the compound in the body. The accumulation of these toxic concentrations is due to severe impairment of the renal excretory function caused by precipitation of the acetylsulfamethylthiazole in the collecting tubules of the kidneys.—DAVID LEHR, JACOB CHURG and WILLIAM ANTOPOL. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 447. (A. E. M.)

Toxicity of Drugs—Effect of Low Body Temperature on. Artificial cooling of mice resulted in increased mortality after injection of lethal doses of strychnine, nicotine, amphetamine, cocaine and procaine. No marked difference was noted after metrazol and morphine. Prolongation of surviving time was observed with all animals which succumbed most markedly after strongly convulsant drugs.—A. J. LESER, C. H. THIENES and D. B. TYLER. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 682. (A. E. M.)

Trichloroethylene—Experimental Study on the Toxic Action of. The pathological lesions caused in rabbits, guinea pigs, rats and mice by acute and chronic respiratory intoxication by trichloroethylene are described.—P. LANDE, P. DERVILLÉE and C. NUN *Arch. Maladies Profess.*, 2 (1939), 454–463; through *Chimie & Industrie*, 43 (1940), 25. (A. P.-C.)

Vanillin and Ethyl Vanillin—On the Toxicity of, for Rabbits and Rats. Reports of vanillin mass poisoning supposedly due to food flavored with vanilla, led to this investigation. Experimental work is reported in detail. It was found that vanillin and ethyl vanillin taken in high concentration cause acute toxemia with death by circulatory failure but quantities employed as flavoring materials in foods are harmless.—WILHELM DEICHMANN and KARL V. KITZMILLER. *Jour. A. Ph. A.*, 29 (1940), 425. (Z. M. C.)

War Gases—Detection of. A discussion and description of the physical properties of the chief war gases, of their chemical and physiological detection, of their methods of projection and tactical value, of the disinfection of contaminated premises and of the first aid to be given to gassed persons.—C. BERTHELOT. *Chimie & Industrie*, 43 (1940), 91–106. (A. P.-C.)

THERAPEUTICS

Acacia Therapy—End Result of, in a Case of Nephrosis. The use of acacia intravenously in the treatment of nephrosis in children has been reported, the purpose being to increase the colloid osmotic pressure of the blood to compensate for the decrease caused by lowered serum protein. In the case report given in the present paper, a six-year-old boy with nephrosis was treated with acacia intravenously in concentrations varying from six to fifteen per cent. In all, 705 Gm. were given. During a period of six months of acacia therapy, the liver enlarged and became very tender. The serum protein fell from 4.7 Gm. to 1.5 Gm. per 100 cc. Six years after this treatment, the boy died and at autopsy acacia deposits in the liver amounted to 50.3 Gm., in the spleen 2.85 Gm. and in the kidney 0.07 Gm. Ultimate recovery of the nephrotic patient is dependent upon his ability to restore his level of serum protein to normal. In this particular case, acacia deposited in the liver may well have interfered with serum protein regeneration.—D. F. FALKENSTEIN and R. L. JACKSON. *J. Pediatrics*, 16 (1940), 700; through *Abbott Abstract Service*, (1941), No. 803. (F. J. S.)

Acetylcholine—Use of, in Combatting the Diarrhoea in Cases of Basedow's Disease. Intestinal disturbances of 16 patients suffering with hyperthyroidism of all grades and morbus Basedow were cleared up amazingly by acetylcholine injection.—RICHARD MAY. *Deut. Med. Wochschr.*, 65 (1939), 1003–1004. (L. K.)

***p*-Aminobenzoic Acid—Effect of, on Therapeutic and Toxic Action of Sulfapyridine.** *p*-Aminobenzoic acid, given subcutaneously, nullifies the curative effect of sulfapyridine, given orally, for Type I pneumococcus infection in mice. The acid has no observable effect on the immediate fatal toxicity of sulfapyridine for mice.—MACLYN MCCARTY. *Proc. Soc. Exptl. Biol. Med.*, 46 (1941), 133. (A. E. M.)

Aminophylline—Therapeutic Effects of, in Asthma. Some six published reports claim aminophylline (theophylline with ethylene diamine) to be effective in relieving the acute distress of intractable asthma. The Council on Pharmacy and Chemistry reported in 1937, and recently reiterated this position, that outside of a diuretic effect and as a myocardial stimulant there is little to recommend theophylline or any of its known preparations. In view of this conflicting situation the authors felt it important to search for further evidence concerning

the effect of this drug in the management of intractable asthma. Of 31 patients receiving 0.24 to 0.48 Gm. of the drug intravenously, 29% experienced complete relief at one time or another, 51.6% experienced moderate relief and 35% no relief at all. The results however were not constant nor were the effects always proportionate to the dose. Ephedrine-fast cases responded to aminophylline but it must be admitted that cases which did not respond to aminophylline were favorably influenced by ephedrine. No unfavorable reactions were observed with aminophylline.—ALEXANDER G. BROWN and WYNDHAM B. BLANTON. *Southern Med. J.*, 33 (1940), 1184–1186. (W. T. S.)

Androstane and Pregnane Series—Compounds of the. Therapeutic or intermediate compounds are produced by treatment of unsaturated compounds of the androstane and pregnane series which possess in a position adjacent to the carbon-to-carbon double bond a methylene group, with oxidizing agents such as chromic oxide, for converting the methylene group into a carbonyl group without protection of the double bond; and reduction products of derivatives richer in oxygen of the androstane and pregnane series are produced by a process in which reducible compounds of these series containing at least 3 oxygen atoms directly connected to the carbon atoms of the androstane or pregnane system are subjected to the action of reducing agents such as aluminum isopropylate (suitably in the presence of a noble metal catalyst). Details of the preparation of various such compounds are given.—ADOLF BUTENANDT and WILLY LOGEMANN, assignors to SCHERING A.-G. U. S. pat. 2,170,124, Aug. 22, 1939. (A. P.-C.)

Anoxia—Drug Prophylaxis against Lethal Effects of Severe. Prophylactic effects of twelve convulsants against severe acute anoxia were observed in some 500 white mice. An equal number of control observations were made simultaneously with each of the treated groups, since it was found impossible to fix the LD_{50} of anoxia for small groups. Complete prophylaxis was not obtained with any of the agents. Full subconvulsive doses of apomorphine, camphor tetrazol, potassium cyanide and strychnine were most effective as prophylactics. Slight, questionable prophylaxis was noted with camphor and picrotoxin. Caffeine, cocaine, coriamyrtin, coramine, epinephrine and metrazol either showed no appreciable prophylactic effect or were possibly harmful. Lower doses of apomorphine, coriamyrtin and strychnine were effective as prophylactics, while a lower dose of metrazol showed slight prophylactic effects and a lower dose of camphor tetrazol had no prophylactic value. Anoxic controls treated with 50 ml./Kg. of saline showed no harmful effects. As exemplified by results with cyanide, lasting respiratory stimulation and the absence of strong metabolic stimulation appeared important in determining prophylactic effect. No constant prophylactic effects were shown by cerebral stimulants, as a class, since they vary in other physiological properties. Slight blood dilution probably has little effect on resistance to anoxia. Limitations of clinical applications of the above findings are discussed.—G. A. EMERSON and E. J. VAN LIERE. *Arch. intern. pharmacodynamie*, 64 (1940), 239. (W. H. H.)

Arsphenamine—Liver Injury Due to, Modified by Diet. When dogs are given arsphenamine in doses of 0.03 Gm. per Kg. or higher, liver injury results to a greater or lesser degree depending on the diet fed. Proteins are found to be most effective in protecting dogs against arsphenamine liver injury. A carbohydrate diet also is beneficial, but is not as uniformly protective and the liver injury may be somewhat greater. Fat has proved to be deleterious, as the arsphenamine dogs showed marked progressive jaundice, severe liver injury and may become intoxicated to the point of death.—W. J. MESSINGER and W. B. HAWKINS. *Am. J. Med. Sci.*, 199 (1940), 216–225. (B. H.)

Ascorbic Acid—Treatment of Infantile Hemorrhagic Glomerulonephritis with. In 14 cases of acute hemorrhagic glomerulonephritis and in 1 case of subacute, the author has utilized ascorbic acid by intravenous administration for the treatment. The results obtained have been satisfactory in all of the cases. The author has stated that with this treatment in children there is a sharp and rapid diminution of hematuria, an augmentation of diuresis and, often, a favorable action upon the general state and upon the various manifestations of the renal syndrome. Of all the symptoms of glomerulonephritis, hematuria responds most favorably to ascorbic acid, producing a strong antihemorrhagic condition and also seems to react favorably to the diuresis. The results are clear and definite in all of the cases where the kidney is the only organ affected and when the determining cause of the nephritis is attenuated or has disappeared. The mode of action of ascorbic acid upon the glomerulonephritis is not precise. The author admits that vitamin C acts in a particular fashion upon the vascular walls and clearly upon the cells of the glomerular network, modifying their tonicity and permeability. Without a doubt he also admits a beneficial biologic action to ascorbic acid, gradual equilibrium of blood protein, antiinfectuous action, direct antagonistic action upon the exogenous and endogenous toxins of nature, protection of the parenchyma of cells at the level of the kidney and of different organs attacked by the infection.—ANON. *La Pediatria*, 47 (1939), 762; through *Presse méd.*, 6–7 (1940), 15. (W. H. H.)

Bee Venom in Therapy. Once a remedy existing doubtfully in folk medicine, bee venom is now a recognized treatment for rheumatism. The author traces the history of this branch of therapy, and describes the German method of preparation of the venom.—F. ZERNIK. *Indian and Eastern Chemist*, 21 (1940), 21. (A. C. DeD.)

Bismuth Treatment—Appearance of Red Corpuscles with Basophilic Granulations under the Influence of. Red corpuscles with basophilic granulations sometimes appear in patients subject to bismuth treatment, but the phenomenon is rare. In guinea pigs there was observed, during experimental intoxication, the appearance of basophilic granulations which were nearly always accompanied by basophilic or semibasophilic red corpuscles. They consisted of successive discharges which seemed to correspond to bursts of medullary activity. At the height of the intoxication the blood of none of the experimental animals contained any basophilic corpuscles or corpuscles with basophilic granulations.—M. ECK, P. BOYE and P. FONTY. *Médecin d'Usine*, 2 (1939), 205–209; through *Chimie & Industrie*, 42 (1939), 809–810. (A. P.-C.)

Carcinogenic Hydrocarbons of Tar. The carcinogenic properties of complex-nucleus hydrocarbons depend essentially on their structure; *e. g.*, of the 10 isomeric dibenzanthracenes only one is carcinogenic. They all derive from the phenanthrene nucleus, which itself is inactive. They are fluorescent and nearly all give a spectrum with 3 lines at 4000, 4180 and 4400 Å. By their constitution they are related to a certain number of products having intense biological properties (morphine, vitamin D, cholesterol, sexual hormones). Benzopyrene is the most active agent. As regards tar, which is a complex mixture, though experimentation has established beyond doubt its positive action on mice, it is not certain that this conclusion can be extended forthwith to human pathology. At any rate it can be asserted that man resists carcinogenic action better

than the mouse; intervention of dusts in the etiology of cancer of the lungs seems probable, though not absolutely certain.—L. HUGOUNENQ. *Ann. Hygiène*, 17 (1939), 1–7; through *Chimie & Industrie*, 42 (1939), 270. (A. P.-C.)

Datura Alba as a Substitute for the Imported Belladonna—Studies on. A comparative study was made of the effects of corresponding graded doses of Tincture of Belladonna, U. S. P. and tincture of *Datura alba* (leaves) whose alkaloidal strength was made to conform with the U. S. P. XI requirement for the tincture of belladonna. The authors served as subjects of the experiments. The effect of both drugs were also observed on a few other subjects, mostly medical students. The two drugs produced more or less parallel effects on the secretions, respiratory rate, blood pressure and pupils. As regards the pulse rate and the central effect, the difference noted points to hyoscine as the main active principle of *Datura alba*. No other effects were observed that cannot be attributed to either atropine or hyoscine. No undue toxicity was observed. Clinical trials of *Datura alba* as a substitute for belladonna were carried out in the Philippine General Hospital. The tincture of *Datura alba* was tried in cases where the tincture of belladonna is usually given. A summary of the cases is given. The effects noted in the patients corresponded more or less with those observed in normal subjects. The drug was administered over relatively long periods without producing cumulative effects. The question of therapeutic effectiveness is considered. The dose that may be recommended is 30–50 drops (0.6 to 1 cc.) of the tincture three or four times daily. In using *Datura alba* as a substitute for belladonna, due consideration must be given to the difference mentioned.—AVELINO J. DAMIAN and RICARDO G. REYES. *Acta Med. Philippina*, 1 (1939), 91; through *Proc. Fifth Sci. Convention Nat. Res. Council Philippines Bull.*, 23 (1939), 138. (P. A. F.)

Dextrose (50%)—Parenteral Use of, in Pruritus and Serum Sickness. Although the basis for this treatment is purely empirical, a report is made of observations on the therapeutic effects of hypertonic solutions of dextrose in patients with serum sickness and with certain types of pruritus. The series comprises fifty-eight patients who presented pruritus as an outstanding symptom. The most noteworthy results were obtained in ten patients with serum sickness in whom relief was immediate, consistent and complete not only of the pruritus but of the accompanying pain in the joints, urticuria and fever. Certain kinds of pruritus responded temporarily or often with prolonged relief and the treatment failed in patients with dermatitis venenata, senile pruritus and infectious eczematoid dermatitis. The usual procedure was to give 50 cc. of a 50% solution of dextrose, followed by repetition of the same procedure or with administration of larger quantities of 5% or 10% solution.—O. M. STOUT and R. J. KOSITCHEK. *Arch. Dermatol Syphilol*, 42 (1940), 802; through *Abbott Abstract Service*, (1941), No. 797. (F. J. S.)

4:4′-Diamidino Stilbene Successfully Used to Treat Indian Kala Azar. The authors report the second case of Indian kala azar to be cured by this drug. The patient received a course of injections of 4:4′-diamidino stilbene in a dosage of 1 mg./Kg. daily for eight days, with the total amount reaching 400 mg. The patient's condition before and after the treatment is described. A comparison is made of the blood picture before and after the treatment.—A. R. D. ADAMS and WARRINGTON YORKE. *Ann. Trop. Med. Paras.*, 34 (1940), 173–174. (W. T. S.)

4:4′-Diamidino Stilbene—Use of, to Treat Early Cases of Nigerian Trypanosomiasis. A mass survey for trypanosomiasis in two previously unexamined districts in Northern Nigeria revealed the percentage of infection to be 1.34 and 1.15, respectively. For the purpose of comparing their efficacy, 4:4′-diamidino stilbene, Bayer 205 and Bayer 205 + tryparsamide, have been used to treat selected cases of this infection. In the case of 4:4′-diamidino stilbene, a group of eight mildly infected patients received 8.8 mg./Kg. of the drug and recovered. Another more advanced group of six patients received 6.3 mg./Kg. and did not recover although appeared to improve during the treatment and showed no symptoms after six months. Trypanosomes disappeared from the gland juice after 1 to 3 injections of diamidino stilbene. No case showed increase in cell count or in globulin content, and four fluids formerly abnormal became normal. If care is taken in the preparation and injection of this drug there is only slight reaction and this lasts not more than twenty minutes. Nine cases of intermediate severity received Bayer 205 and after seven months symptoms were absent but marked improvement lacking. Seven mild cases received Bayer 205 + tryparsamide to recover and showed more marked general improvement than all others. Cases receiving diamidino stilbene are analyzed in tables. —J. L. MCLETCHIE. *Ann. Trop. Med. Paras.*, 34 (1940), 73–82. (W. T. S.)

Dihydrotachysterol, Parathormone and Vitamin D_2—Comparison of Their Values in the Treatment of Post-Thyroidectomy Hypocalcemic Tetany. A description is given of the symptoms of the tetany following removal or injury to the parathyroid during thyroid operations. A treatment, consisting mainly of measures to raise the calcium level in the blood, is outlined. Parathormone (I), dihydrotachysterol (II) and vitamin D_2 (III) are described and a history of their use in this type of tetany presented. These three factors were compared as to efficacy in restoring calcium metabolism in eleven cases of hypoparathyroid tetany which were reported in detail. In acute cases, calcium gluconate with factor I or II should be given, and in chronic cases calcium gluconate with factors II and III is indicated. The effect of I is gradually decreased as tolerance developed and moreover factor I has no effect on the absorption of calcium from the intestines. Increase in calcium absorption and increase in urinary calcium excretion are actions of both factors II and III. The ratio of these actions is greater than with III which explains why II is not antirachitic. Factor III produces the same action as II but because of the lesser ration it is antirachitic. The action of factor III is slower than II but lasts longer. In this series, factors II and III were equally effective in the treatment of this tetany and superior to I if continued over a long period of time.—DAVID HENRY POER. *Southern Med. J.*, 33 (1940), 1174–1180. (W. T. S.)

Distibinyl—Use of, in the Treatment of Chinese Kala-Azar. Distibinyl, the diethylamine salt of di-*p*-aminophenylstibinic acid, is an inexpensive pentavalent antimony compound recently synthesized in China by Chinese chemists. Distibinyl contains 40.6% of Sb and its maximum tolerable dose in rats is 200 mg. per Kg. Distibinyl dissolved in cold distilled water and intravenously injected in an average dose of 0.10 Gm. on alternate days generally improved the condition of some 55 kala-azar patients. *L. donovani* became negative and the drug appeared to be equal to other pentavalent antimony compounds generally used against this disease. No severe complications followed its use. The results of the treatment are tabulated.—C. JUNG SUN. *Indian Med. Gaz.*, 75 (1940), 332–336. (W. T. S.)

N^1-Dodecanoylsulfanilamide and Sulfapyridine Plus Vitamin C in Experimental Tuberculosis in

Guinea Pigs. Treatment with dodecanoylsulfanilamide showed no inhibitory effect on the course of experimental tuberculosis in guinea pigs. Sulfapyridine, alone or combined with vitamin C, was also ineffective in the infection with human tubercle bacilli.—M. MAXIM STEINBACH and CHARLES J. DUCA. *Proc. Soc. Exptl. Biol. Med.*, 44 (1940), 133. (A. E. M.)

Drug Addiction—Some Aspects of. A discussion of certain drugs that may lead to various degrees of addiction. Items discussed are Indian hemp, mescal buttons, codeine, tea, medicated wines, chloroform and aspirin.—W. P. KENNEDY. *Pharm. J.*, 144 (1940), 169. (W. B. B.)

1162 F—Intrapleural Injections of. The authors report an observation of a young man 22 years of age who possessed a right pulmonary tuberculosis and who developed a scarlatina. It presented a grave general state. A series of intrapleural injections of 1162 F immediately caused a rapid amelioration of the general state and disappearance of the fever. The authors were amazed at the remarkable effects of the intrapleural injection of 1162 F.—A. LEMIERRE, BONNENFANT and DUFRESNE. *Soc. Med. des Hospitaux*, (April 19, 1940); through *Presse méd.*, 38–39 (1940), 441. (W. H. H.)

Epinephrine Injections—Relief of Dysmenorrhea with. The author assumes that menstrual cramps are due to spasmodic contraction of the uterine muscle. Contraction rings and menstrual cramps are produced by spasm of the cervical and uterine muscle fibers and should be relieved by drugs which act on the autonomic nervous system. Therefore, the author used epinephrine because of its known action in relaxing the uterine muscle when a contraction ring forms during labor. The uterus is innervated by both divisions of the autonomic nervous system through the sympathetics and vagi which are antagonistic to each other. The vagi exercise the constrictor and the sympathitics the dilator function on the uterine muscle fibers. Stimulation of the sympathetics by hypodermic use of adrenaline relaxes muscle spasm produced by overactivity of impulses through the vagi. Two cases of dysmenorrhea are presented in which patients received from three to five minims of 1:1000 epinephrine solution. Prompt relief of the cramps is reported to have followed use of this therapy.—J. T. WOLFE. *Virginia Med. Monthly*, 67 (1940), 548; through *Abbott Abstract Service*, (1941), No. 778. (F. J. S.)

Estriol in Ointment for the Treatment of Senile Vulvovaginitis. The use of estriol in an ointment base for local use in senile vulvovaginitis has proved of definite value. A histologic study of the tissues involved gives some evidence as to why topical application is more effective than the hormone administered by injection. The vascular system of the affected areas shows marked abnormalities, and it is possible that hormone carried through the circulation fails to reach the areas, particularly the peripheral sites. In the local treatment amelioration of symptoms occurs after a period of 2 to 3 weeks. Systemic action by absorption of the hormone is evidenced by alleviation of such menopausal symptoms as hot flashes. Recurrences may take place, but these respond promptly to further treatment with estrogenic ointment. Estriol was chosen inasmuch as it has been fairly well established that this particular substance is more easily absorbed from the gastrointestinal tract and the authors thought that it therefore might be more easily absorbed percutaneously.—D. R. MISHELL and L. MOTYLOFF. *Am. J. Obstet. Gynecol.*, 39 (1940), 796; through *Abbott Abstract Service*, (1941), No. 779. (F. J. S.)

Estrogen—Effect of, on Pituitary and Urine. Investigations have been made of the amount of gonadotrophin in the pituitary glands of post-menopausal women, untreated and after the administration of large amounts (10 mg. or 100,000 I. B. U.) of estradiol benzoate daily over periods lasting from three to fifty-four days. The estrogen causes a decrease in the content of gonadotrophic substance as assayed on the hypophysectomized rat. It has also been shown that the presence of a small amount of a gonadotrophic substance in the urine of an ovariectomized woman was abolished by the same dose of estradiol benzoate.—I. W. ROWLANDS and E. P. SHARPEY-SCHAFER. *Brit. Med. J.*, 4127 (1940), 205. (W. H. H.)

Gastric Affections—Pasteurized Grape Juice as Therapeutic Agent in. Pasteurized grape juice exerts a favorable action on the gastric mucosa, overcoming inflammation and consequently dyspeptic phenomena. Moreover, it regulates the glandular secretions, as regards both acidity and digestive power. Pasteurized grape juice treatment is indicated in cases of gastric neuritis and gastritis; it is ineffective in antacid states, and contraindicated in gastric ulcer.—A. V. DYAKONOV, Z. L. EPSTEIN, M. N. LIVSHUTZ and V. IA. VLADIMIROV. *Voprosy Pitaniya*, 7 (1938), No. 6, 48-54; through *Chimie & Industrie*, 42 (1939), 1068. (A. P.-C.)

Globin Insulin—Clinical Experience with. The effect of a single daily dose of a clear solution of globin insulin was studied in 25 cases of diabetes in a period of about two years. No skin reactions were observed. Mild and moderately severe cases were adequately controlled. Several cases uncontrollable with protamine zinc insulin were controlled fairly well with the globin compound.—L. BAUMAN. *Am. J. Med. Sci.*, 198 (1939), 475–481. (B. H.)

Gold Sodium Thiosulfate—Indications for Use of, in Rheumatism. The indication for gold therapy is rheumatoid arthritis in which the etiology has not been determined or which has not improved under etiologic treatment. The disease is characterized by periods of exacerbation and treatment should be undertaken especially when exacerbation is incipient. Anatomic changes are not modified by gold. In selecting patients for treatment, hepatic and renal disease are contraindicating factors. A history of allergic diathesis as manifested by eczema, urticaria or asthma should indicate great caution in giving gold. Diabetes, hypertension and arteriosclerosis require extra caution. In general, gold salts are no more toxic than neosalvarsan or sulfanilamide. The author prefers to start with small doses and to keep them small. He uses 0.01 to 0.025 Gm. repeated 2 or 3 times. Then he increases the dose to 0.05 Gm. and repeats 2 or more times. Finally he uses 0.10 Gm. and does not exceed this dose. These injections are given twice a week. The intramuscular route is said to be as efficacious as the intravenous.—A. R. MORENO. *El Dia Medico*, 12 (1940), 624; through *Abbott Abstract Service*, (1941), No. 791. (F. J. S.)

Histamine—Use of, in the Treatment of Arthritis. A satisfactory basis for treatment of rheumatoid arthritis has not been established, and some treatments are expensive and complicated. Certain drugs having a vasomotor effect have been administered with some success by means of iontophoresis. Histamine diphosphate dilution 1:1000, when given properly to individuals without complete ankylosis of joints, will increase motility and frequently relieve pain. The subcutaneous administration seems to be as satisfactory as iontophoresis and is far superior to the use of the ointment. The drug should be administered cautiously and when failures are encountered it should be immediately discontinued. Since patients do not readily develop a tolerance for the drug, it can be administered over long per-

iods of time. It will not cure arthritis but it apparently enhances the value of other forms of therapy and enables the patient to carry on activities which would otherwise be impossible.—R. O. MUETHER. *Ann. Int. Med.*, 13 (1940), 2147; through *Abbott Abstract Service*, (1941), No. 788. (F. J. S.)

Histamine Iontophoresis—Treatment of Varicose Ulcers with. Varicose ulcers which have failed to respond to other recognized methods can be successfully treated by histamine iontophoresis, sometimes assisted by the application of ultraviolet light to the ulcer and surrounding skin.—S. V. GOULD-HURST. *Lancet*, 238 (1940), 739. (W. H. H.)

Honey as a Healing Agent.—ANON. *Wien. Pharm. Wochschr.*, 72 (1939), 441. (H. M. B.)

Hydrofluoric Acid Corrosion—Treatment of Experimental. Infiltration of 3% calcium gluconate within 8 hours after application of hydrofluoric acid caused a significant shortening in healing time and reduction in the incidence of suppuration. Multiple treatment at 24-hour intervals is more effective than single treatment. The lesions heal characteristically by granulation under a hard crust.—AARON PALEY and JOSEPH SEIFTER. *Proc. Soc. Exptl. Biol. Med.*, 46 (1941), 190. (A. E. M.)

Hydrofluoric Acid Burns—Effective Treatment of. The treatment consists in the application of a moist glycerol-magnesia paste immediately after occurrence of the burn. If delay occurs before the treatment is applied, a subcutaneous (not intravenous nor intramuscular) injection of Calcium Sandoz solution (10% solution of calcium gluconate lactobionate) is required in addition to the paste. The past neutralizes the acid action and, together with the injected solution, precipitates the fluorine ions by means of the magnesium and calcium ions. No harmful effects have been observed from the use of the subcutaneous injection. Animal experiments and clinical cases are reported.—K. FREDENHAGEN and H. FREDENHAGEN. *Angew. Chem.*, 52 (1939), 189–190; through *Chimie & Industrie*, 42 (1939), 470. (A. P.-C.)

Insulin—Crystalline, Compared with Amorphous Insulin. Regular insulin (amorphous) was compared with zinc insulin crystals. Crystalline insulin is formed from amorphous material only in the presence of heavy metals, zinc, nickel, cobalt or cadmium. Tests were made on eight normal persons and on eight patients with diabetes of long duration. Chemical studies included blood sugar by the Folin micro-method, urine sugar by Smith's modification of Benedict's method and the Kjeldhal method for total nitrogen in the urine. The patients, four men and four women, spent 33 to 73 days in the hospital, their ages ranged from 20 to 58 years and all were intelligent and coöperative. They were kept on a constant weighed diet. The eight normal controls were healthy men 21 to 24 years old. Test days on each were one week apart. Each subject received two tests with each type of insulin in alternating or "crossover" procedures. Both types of insulin which were used may be considered as rapidly acting types of insulin. The action of the crystalline type was slightly prolonged in both normal and diabetic subjects. The diabetics experienced a slightly greater lowering of blood sugar following the crystalline type. The differences were of such slight degree as to be of minor significance clinically. It seems desirable to limit the types of insulin to the rapidly acting insulin prepared from crystalline rather than amorphous material and the slowly acting variety protamine zinc insulin.—ALEXANDER MARBLE and ILMARI VARTIAINEN. *J. Am. Med. Assoc.*, 113 (1939), 1303. (G. S. G.)

Iodized Sulfur (Colloidal) in Arthritis—Oral Use of. Colloidal iodized sulfur, given by mouth has been efficacious in removing or decreasing the disability and pain which attended rheumatoid osteoarthritic conditions in 80% of cases studied by the author. There were no constitutional reactions and generally any constitutional deficiences were improved. Colloidal iodized sulfur is of benefit to arthritic patients who have a deficiency in cystine in the body or an imbalance in the sulfur metabolism.—I. I. LUBOWE. *Clin. Med. Surg.*, 47 (1940), 210. (W. H. H.)

Liver—Studies on the Detoxicating Hormone of the. I. Effect of Yakriton upon Detoxicating of Sodium Santonate by the Liver. Yakriton, the detoxicating hormone of the liver, has the ability to strengthen the detoxication of sodium santonate by the liver, as Takasugi and Miyamoto have already stated. The liver power strengthened by yakriton for the purpose of detoxicating sodium santonate will remain potent for a long time. **II.** The effect of yakriton will be remarkable when it is used in a relatively large amount and not long before the administration of sodium santonate. If yakriton is used in a moderate amount repeatedly, the effect will be piled up or accumulated; if used in an excessive amount, its effect will show itself after a long lapse of time from its injection. Effect of yakriton, used in a moderate amount and way, will remain potent for a long time.—F. OHTA. *Tôhoku J. Exp. Med.*, 38 (1940), 323, 333. (A. C. DeD.)

Male Sex Hormone—Treatment of Mental Disorders with. The author believes that the form of psychoneurotic symptoms is largely determined by the degree of stability shown by the vegetative nervous system, and this, in its turn, is dependent on glandular activity. On these grounds one obtains at least a hint of how these therapeutic agents act in the amelioration of psychoneurotic symptoms. In all the cases reported except one, the author believes that to sex gland extracts alone the remarkable improvement can be ascribed. In this exceptional case psychotherapy was definitely of value, but the remarkable speed and extent of the improvement were due to the hormone therapy. The author is quite convinced that the pure hormone products used in these cases are of a potency and usefulness such as he has not encountered before in the treatment of psychiatrical conditions by the older gland extracts. It may well be that in this direction lies a future hope in the treatment of psychotic conditions.—A. GUIRDHAM. *Brit. Med. J.*, 4122 (1940), 10. (W. H. H.)

Male Sex Hormone Therapy—Progress in. Testosterone propionate, the true male sex hormone, is of great value in the treatment of hypogonadal boys and men, and in the relief of the male climacteric. It gives symptomatic relief to many patients suffering from prostatism. It will check menopausal bleeding and menorrhagia, if no serious organic disease is present. Lactation is suppressed quickly and painlessly. Arterial disease and hyperthyroidism may be favorably influenced by such therapy. It has not been mentioned in any literature available, but the author suggests that it might be useful in pseudohermaphrodites. Impotence, when due to a lack of male sex hormone, is quickly benefited.—R. L. GORRELL. *Clin. Med. Surg.*, 47 (1940), 178. (W. H. H.)

Medicines Used in Dentistry. A number of N. F. VI preparations are described as to properties and uses.—JAMES E. AIGUIER. *N. Y. J. Dentistry*, 10 (1940), 116–121, 169–175, 222–228; through *Chem. Abstr.*, 34 (1940), 4233. (F. J. S.)

Mercurial Diuretics in Dropsy. Urea in single daily doses of 20–40 Gm. is recommended for combined use with mercurial injections to prolong the periods between injections in cases of cardiac dropsy.—M. WINTERNITZ. *Lancet*, 238 (1940), 880. (W. H. H.)

Metaphen—Use of, in the Treatment of Pruritus Ani. Pruritus ani is one of the most distressing conditions involving the anal region and the least amenable to treatment. Its exact etiology is not definitely established. In most cases there probably are several factors and each case should be treated as an individual problem. The present paper prescribes the various treatments tried in 175 cases of pruritus ani. Symptoms vary from the burning of an acute dermatitis with erythema of the peri-anal skin to a constant itching, in chronic intractable cases. Many simple early cases can be cured with nothing more than careful hygiene. Acute stages of erythema, excoriation and vesication without chronic skin changes can be made to disappear in one or two weeks by the application of Tincture of Metaphen daily. Even cases that present signs of an acute dermatitis superimposed on the chronic changes should be treated by this means. Results obtained by the injection of quinine and urea hydrochloride and procaine, Gabriel's solution and 70% alcohol are reported.—G. S. SPEARE and R. E. MABREY. *New Engl. J. Med.*, 223 (1940), 274; through *Abbott Abstract Service*, (1941), No. 792. (F. J. S.)

Nicotinic Acid—Use of, in the Treatment of Acne. The author gave 50 mg. of nicotinic acid twice daily to 46 university students with acne. Thirty-eight of the patients were followed and were examined after 4 and 8 weeks. Sixteen per cent had good results, 39% fair and 45% showed no improvement. Thus 55% of the patients improved. The only unpleasant reaction observed in the group was transitory redness, burning or itching in the flush areas of the face, chest and arms. This reaction could usually be avoided by taking the drug immediately after meals. The author was unable to explain the mode of action of nicotinic acid in these cases, but it may be noted that it is one of the factors in liver, which has been repeatedly advocated in the treatment of acne. The author believes he noted a very marked beneficial effect on the seborrheic tendency of the skin. He is not convinced that the improvement can definitely be attributed to nicotinic acid, but it is a simple and apparently harmless drug which seems definitely to be of benefit in this condition.—F. W. LYNCH. *Arch. Dermatol. Syphilol.*, 42 (1940), 481; through *Abbott Abstract Service*, (1941), No. 793. (F. J. S.)

Nicotinic Acid Amide—Absence of Reactions Following Therapeutic Doses of. Doses of nicotinic acid amide up to 500 mg. by mouth, while fasting, have been given to patients who had previously been saturated with nicotinic acid so that they consistently had flushing reactions following 40 mg. doses, orally after meals. Ingestion of these doses of the amide was not followed by peripheral vasodilator or any other of the symptoms which follow the ingestion of larger doses of nicotinic acid.—H. FIELD, JR., and W. D. ROBINSON. *Am. J. Med. Sci.*, 199 (1940), 275–276. (B. H.)

Opium Addiction—Treatment of. Since the principal withdrawal symptom in an addict is a severe disturbance in the equilibrium of body fluids, the authors have evolved a treatment for this addiction consisting of administering lecithin and glucose after the patient is entirely deprived of the drug. The treatment requires seven to twelve days. The results of the treatment were followed by biochemical and biophysical examinations of the blood and discussed from these standpoints. The treatment is reasonable in cost and has been successfully used in over twelve thousand cases.—R. N. CHOPRA and G. S. CHOPRA. *Indian Med. Gaz.* 75 (1940), 388–392. (W. T. S.)

Organotherapy. A discussion of the male and female sex hormones, luteum, suprarenal glands, parathyroid, hypophysis, anterior and posterior pituitary, pineal gland, thymus and the secretions of the duodenum.—ERNST NAHMACHER. *Scientia Pharm.*, 11 (1940), 25–26, 43–44. (H. M. B.)

Pneumonia—Chemotherapy of. The use of sulfapyridine in the treatment of pneumonia is discussed.—N. PLUMMER. *Bull. N. Y. Acad. Med.*, 16 (1940), 208. (A. C. DeD.)

Pontocaine—Use of, in Spinal Anesthesia. Properly used, spinal anesthsia was said to have definite advantages from the patient's and the surgeons's standpoints. A report based on 1710 consecutive cases states that pontocaine is both a safe and effective spinal anesthetic. The pontocaine glucose method of Size was used from which untoward reactions were encountered in only 2 patients. The cases are analyzed in tables as to: the type of operation, sex and color of the patients, complications and other pertinent data. An analysis of 36 postoperative deaths is given. An authoritative discussion accompanies the report.—E. BRYCE ROBINSON. *Southern Med. J.*, 33 (1940), 952–962. (W. T. S.)

Praequine—Composition and Properties of. This synthetic antimalarial, the salt of a quinoline derivative, is particularly valuable as a prophylactic since it destroys the gametocytes of all types of malaria parasites. The dosage must be controlled or toxic symptoms as epigastric pain, nausea, headache, cyanosis, etc., will appear. Praequine may be used alone or in conjunction with quinacrine or quinine.—ANON. *Indian Med. Gaz.*, 75 (1940), 384. (W. T. S.)

Prolan—Treatment of Bronchial Asthma with. Condorelli has observed a complete and definite improvement from the injection of gonadotropic hormone in a number of cases of asthma in both sexes. The technique employed was: first week, 300 units per day in three injections; second week 200 units per day in two injections; third and fourth weeks one injection of 100 units. In six cases of bronchial asthma there was diminution in the number and violence of the attacks. Nine of fourteen clinical patients showed definite improvement while the other five continued to present difficulties after they had received relief from severe attacks. This treatment which is always efficacious in essential bronchial asthma has no contraindications. It is always well supported; its effects are often manifested during the first days, often after many weeks; it is not influenced either by sex or age.—L. CAPANI. *La Clinica med. italiana*, 70 (1939), 327; through *Presse méd.*, 40–41 (1940), 55. (W. H. H.)

Prontosil on Avian Malaria—Studies on the Effect of. Preliminary Report. Ten birds, *Padda oryzivora* L. ("maya costa"), infected with *Plasmodium praecox* were treated with prontosil (disodium 4-sulfamido-phenyl-2-azo-7-acetylamino-1-hydroxy-naphthalene-3,6-disulfonate) by injecting the solution into the breast muscle. An equal number of infected birds were used as control. Blood smears were made and examined before each injection and the number of parasites, corresponding to twenty-five leucocytes, counted. The same procedure in so far as the determination of infection is concerned was observed in the untreated birds. There was complete disappearance of the parasites in all the treated birds except one that died before the close of the experiment. The ten untreated birds used as controls persisted positive for plasmodia, the infections remaining in the nine of them that survived practically the same up to and long after the close of the experiment. From these results it would seem that the use of prontosil in the treatment of human malaria is justifiable in so far as the effect on the parasites is concerned.—CANDIDO M. AFRICA, FRANCISCO J. DY and LILY J. SORIANO. *Acta*

Medica Philippina, 1 (1939), 19; through *Proc. Fifth Sci. Convention Nat. Res. Council Philippines Bull.*, 23 (1939), 105. (P. A. F.)

Pyrazolon Derivatives—Significance of, in Combatting Local Infections. A discussion of its use in 34 cases.—JOACHIM KIRSCH. *Deut. Med. Wochschr.*, 65 (1939), 1376–1379. (L. K.)

Quinacrine—Composition and Properties of. Quinacrine is the dihydrochloride of a synthetic acridine derivative which is also available in a soluble form for injection purposes. It is active against malarial parasites, especially the schizonts of *Pl. falciparum*. Quinacrine produces yellow pigmentation but is of a low toxicity showing however some cumulative effects. Its slight form of intolerance is largely prevented by intake of copious liquids and taking the drug during meals.—ANON. *Indian Med. Gaz.*, 75 (1940), 383. (W. T. S.)

Shock Treatment—New Dye for. It is announced that a quantity of a special dye—T 1824—which is unobtainable in this country, is being flown across from the United States for experiments, at the London Hospital, for the treatment of shock. In secondary shock the most serious form, prostration, is mainly due to a considerable fall in blood pressure, which, in turn, is due to a fall in the volume of the circulating blood. The main subject of the present investigation is to determine whether this fall can be largely prevented or counteracted by use of the dye, of which only 10 grams is obtainable at present.—ANON. *Chemist and Druggist*, 134 (1941), 60. (A. C. DeD.)

Snake Venom—Routine Treatment of Epilepsy by. The author outlines a treatment for epilepsy in which a mixture of cobra and Russell viper venoms are injected, followed by oral doses of *Rauwolfia serpentina* extract. Thus the anticonvulsant action of the cobra venom is augmented by the sedative and hypnotic activity of the extract.—J. S. CHOWHAN. *Indian Med. Gaz.*, 75 (1940), 382. (W. T. S.)

Stilbestrol Dipropionate and Hexestrol—Estrogenic Properties of. Stilbestrol dipropionate and hexestrol have estrogenic properties similar to those of stilbestrol, in so far as they are capable of the following actions: inducing uterine hemorrhage in cases of amenorrhea; relieving the symptoms of menopausal syndrome; leading to the appearance of cornified cells in the vaginal smear in menopausal cases; restoring the normal conditions of the vulva and vagina in senile atrophic vaginitis; relieving the pain of dysmenorrhea; inhibiting lactation. Toxic effects though not in the authors' experience severe, developed in 21.6% of cases treated with stilbestrol dipropionate and in 4.5% of cases treated with hexestrol.—P. M. F. BISHOP, R. K. BOWES, M. BOYCOTT, R. KELLAR, T. N. MACGREGOR and B. C. MURLESS. *Lancet*, 238 (1940), 629. (W. H. H.)

Sulfamides—Use of, in Treatment of Trachoma. The results obtained are based upon 200 cases. The subjective symptoms, pain and photophobia, disappear in forty-eight hours. The pannus and infiltration of the cornea are reabsorbed in eight hours. The epithelial corneal ulcers are removed in thirty-six hours. The cicatricial process is greatly accelerated. The clinical cure is obtained in three weeks with 75% of the cases. The superadded infections, such as Week's baccilli, diplobaccilli of Morax, pneumococci and gonococci are sterilized in four days.—F. JASSERON and G. MORARD. *Presse méd.* 20–21 (1940), 234. (W. H. H.)

Sulfanilamide and Sulfapyridine—Use of, in Children. A review of the literature on the therapeutic results obtained on administration of the two drugs to children.—A. E. SIEGEL. *Am. J. Med. Sci.*, 199 (1940), 141–153. (B. H.)

Sulfanilamide—Case of Cerebrospinal Fever Cured by. Oral and intravenous administrations of sulfanilamide drugs cured an obviously severe case of cerebrospinal meningitis in a fourteen-year old boy. The case was treated over a period of fifteen days during which the number of intracellular diplococci found in the spinal fluid steadily decreased.—BABU RAM GARY. *Indian Med. Gaz.*, 75 (1940), 353–354. (W. T. S.)

Sulfanilamide—Complications Following the Use of, in Otitis Media. The results of sulfanilamide treatment have been so satisfactory in the past few years that there is some danger that its limitations and untoward effects may be overlooked. Most authorities are in favor of the use of sulfanilamide in middle ear disease but some feel that it has led to an increase in complications. A review of the literature reveals the fact that a number of observers believe that sulfanilamide will mask or delay the familiar symptoms of mastoiditis. They feel inclined to avoid using it except in severe complications. If it is given in uncomplicated otitis media it must be administered before suppuration has taken place. The purpose of this paper is in no way to minimize the therapeutic value of sulfanilamide. It is to caution against the indiscriminate use of the drug in middle ear diseases and to warn that when the drug is used signs of complications must be watched for very carefully, remembering that these may be at least partially concealed.—F. H. REULING. *Jour. Iowa State Med. Soc.*, 30 (1940), 400; through *Abbott Abstract Service*, (1941), No. 796. (F. J. S.)

Sulfanilamide in War Wounds. The recommendations of the War Office for the prophylactic use of sulfanilamide in war wounds are in the main supported. It is recommended that the first dose should be 1.5 Gm., given in solution for rapid absorption, and that the succeeding 0.5-Gm. doses, starting two hours after the first dose, should be given one every hour for four hours as intact tablets to prolong their effect. It is essential that the first dose be given as soon as possible after wounding, to combat the gas gangrene organisms which are implanted at the time of injury and develop quickly. Further, prophylaxis must be continued for at least four days, because many of the hemolytic streptococcal infections are not caused at the time of the wound but later in the hospital. Delay is dangerous. If several hours have elapsed before treatment begins, the first few doses should be increased. The use of proseptasine or of coated tablets to secure more prolonged retention of the drug does not at present seem to offer any advantages.—A. T. FULLER and G. V. JAMES. *Lancet*, 238 (1940), 487. (W. H. H.)

Sulfanilamide—Mode of Action of. Beginning with Domagk's investigations in 1935, the author gives a comprehensive review of the published work undertaken to account for the chemotherapeutic activity of sulfanilamide. Fifty-five reports are included in the review.—U. P. BASU. *Indian Med. Gaz.*, 75 (1940), 350–353. (W. T. S.)

Sulfanilamide Powder—Use of, in Open Wounds. In a report of ten cases of severe lacerations about the face and extremities, physicians at the Lewis-Gale Hospital of Roanoke, Virginia, give their experiences with the use of sulfanilamide powder in open wounds. They started using the powder on December 1, 1939, and by May 1, 1940, they had used it in two hundred and seventy-three cases in the industrial department. They treated the wounds about the scalp, face and hands in the usual manner as to cleansing and antiseptics, doing débridement and inserting sutures, only one change

being made—that is, leaving drains out of the wounds. Sulfanilamide powder, which had been previously autoclaved, was gently sprayed from an atomizer, used as a blower over the wounds. In the irrigation of cavities, sulfanilamide powder, with water to make a rather thick suspension was used. No ill effect ensued and the patients convalesced without incident. The authors believe that the use of sulfanilamide powder is of distinct advantage.—M. JOHNSON, JR., and F. F. DAVIS. *Virginia Med. Monthly*, 67 (1940), 748; through *Abbott Abstract Service*, (1941), No. 801. (F. J. S.)

Sulfanilamide—Significance of the Oxidation of, During Therapy. The conclusion that sulfanilamide is oxidized during therapy is supported by these observations: Complete, initial deprivation of O_2 interferes with bacteriostasis. Increased oxygen availability magnifies bacteriostasis. Reducing agents and large inocula, which rapidly reduce the potential, obliterate bacteriostasis despite excess of sulfanilamide. The occurrence of methemoglobinemia during therapy and the occurrence of an oxidation product of sulfanilamide in the urine of treated patients confirm the view that an oxidant is produced in the blood or tissues of the patient.—C. L. FOX, JR. *Am. J. Med. Sci.*, 199 (1940), 487–494. (B. H.)

Sulfanilamide—Use of, in the Treatment of Chancroid. Sulfanilamide is of value in the treatment of chancroidal infections. It should not be used, however, in routine manner, but with knowledge of its value and indications. There is no advantage in giving sulfanilamide to patients with small and uncomplicated chancroids. Local antiseptic therapy seems to be sufficient in these cases, but if the lesions do not heal promptly, sulfanilamide should be given. For large lesions, sulfanilamide associated with local therapy should be used. In some cases of phagedenic chancroid the result of the treatment by sulfanilamide is striking; in others it is a failure. In all such cases, therefore, it should be tried in conjunction with local therapy. When adenopathy is present in the unruptured stage, rest in bed and aspiration of the bubo are necessary and of paramount importance in proper treatment. The drug does not decrease the formation of pus. However, the best results with sulfanilamide are obtained in patients with ruptured buboes.—O. CANIZARES and J. A. COHEN. *Arch. Dermatol Syphilol.*, 42 (1940), 649; through *Abbott Abstract Service*, (1941), No. 782. (F. J. S.)

Sulfapyridine Urinary Lithiase. A man, 52 years old with a respiratory infection, received a total of 24 grams of *p*-aminobenzenesulfamidopyridine. Ten days later he possessed some abdominal pains with some vomiting, and without defecation. He possessed urinary difficulties. A cystoscopic examination revealed a small ovoid yellowish foreign body obstructing the right ureteral orifice. This body was composed of crystalline material which revealed the benzene radicle. The susceptible factors favoring the formation of calculi of sulfapyridine often appear to be dehydration, marked in bronchopneumonia, limited solubility of sulfapyridine and the insolubility of the acetyl derivatives.—M. R. KEEN. *N. Y. State J. Med.*, 40 (1940), 83; through *Presse méd.*, 40–41 (1940), 55. (W. H. H.)

Sulfapyridine—Use of, in the Treatment of Gonorrhea. Sulfapyridine is stated to have an undeniable activity and efficiency in gonorrhea Ninety-five per cent of the cases treated become symptom free in from 5 to 10 days. Cases which can be confined to bed recover more quickly. The author believes that local treatment should be combined with chemotherapy for the best results. The most acceptable system of dosage was 3 Gm. daily for 3 days, 2 Gm. daily for 3 days and 1 Gm. daily for 3 days. Beginning treatment with 4 Gm. daily gives better and more rapid results, but the drug is not always well tolerated. The physician must choose between the reactions which occur with higher doses and the danger of failure which occurs with smaller doses. The author does not believe that any effect on spermatogenesis by chemotherapeutic agents is to be feared. Even if it is present, the effect is only temporary. Since the advent of sulfonamides in treatment, complications from gonorrhea have become much less frequent.—G. IACAPRARO. *El Dia Medico*, 12 (1940), 894; through *Abbott Abstract Service*, (1941), No. 789. (F. J. S.)

Sulfathiazole—Use of, in Carbuncles and Staphylococcic Abscesses. In a series of studies on 40 cases of staphylococcic infection, including carbuncles, furuncles and abscesses, some patients received sulfamethylthiazole and others received sulfathiazole. Both drugs were given in 1-Gm. doses every four hours with an initial dose of 2 Gm., which usually gave a concentration in the blood of about 4 mg. per cent. Children received 0.5 Gm. per 25 pounds of body weight as an initial dose with a maintenance dose of 0.25 Gm. per 25 pounds of body weight every four hours. Children eliminate the thiazoles rapidly and tolerate them well. The low incidence of reactions of any consequence make sulfathiazole a relatively safe drug for use in ordinary staphylococcic infections. Furuncles were affected most readily and disappeared within four days. Carbuncles responded with relative rapidity. In conclusion, it was stated that these various lesions should be handled in the customary manner with the addition of thiazole medication.—C. A. BELING and A. R. ABLE. *Am. J. Surgery*, 50 (1940), 258; through *Abbott Abstract Service*, (1941), No. 806. (F. J. S.)

Sulfathiazole—Use of, in the Treatment of Pneumonia in Children. One hundred and sixty-seven children with pneumonia were treated with sulfathiazole. A daily dose of 1 gr. per pound of body weight was used. One-fourth to one-half of this amount was given as an initial dose and then one-eighth of the daily dose was given every 3 hours day and night and continued until the temperature had been normal for 48 hours. One hundred and sixty-two of these patients recovered and 5 died. All patients who died were less than 1 year old. Toxic effects were largely gastro-intestinal, consisting of vomiting and diarrhea, and were mild in comparison to similar effects caused by sulfapyridine. Sulfathiazole is equally as effective as sulfapyridine in producing critical falls in temperature in patients with pneumonia. It is questionable if there is any difference in promptness of action between the two drugs. In moderate doses over a brief period of time, the authors believe sulfathiazole to be a safe drug for use in children with pneumonia.—J. P. SCOTT and A. M. JONES. *J. Pediatrics*, 17 (1940), 423; through *Abbott Abstract Service*, (1941), No. 804. (F. J. S.)

Sulfonamide Compounds—Dosage of. With sulfanilamide, the dose depends upon the type and severity of the infection; in adults suffering from serious infections the dose should be 1 Gm. every four hours for forty-eight hours and then from 0.5 Gm. ($7\frac{1}{2}$ gr.) to 0.66 Gm. (10 gr.) every four hours thereafter. Where it is impossible to give the dose by mouth subcutaneous injections should be given of a 1% solution of sulfanilamide in physiological saline, or preferably in one-sixth molar sodium racemic lactate solution. The same dosage is given parenterally as that administered orally, but injections should be at intervals of six to eight hours. Adults suffering from lobar pneumonia require large initial doses of sulfapyridine, *e. g.*, as much as 4 Gm.

in a single dose, followed by 1 Gm. every four hours until the temperature has been normal for at least forty-eight hours, when the dose is reduced to 1 Gm. every six hours until the resolution of the pneumonia is well under way. The dose of the drug should then be reduced to 0.5 Gm. four times a day, and this should be continued until the lungs are clear. A scheme of dosage in children based on concentration of sulfapyridine in the blood has been prepared, and is given in table form.—ANON. *Pharm. J.*, 144 (1940), 136. (W. B. B.)

Sulfonamide Derivatives—Chemotherapy with the. The author has shown the bearing of these derivatives on clinical therapeutics.—F. G. BLAKE. *Bull. N. Y. Acad. Med.*, 16 (1940), 197. (A. C. DeD.)

Sulfonamides—Effects of, in Lupus Erythematosus. It is suggested that lupus erythematosus may be either of tuberculous or streptococcal origin. When the disease has been apparently due to streptococcal infection, characteristic reactions to treatment with the sulfonamides have been observed, with subsequent benefit to the eruption, in a high proportion of cases, whereas a tuberculous infection, when responsible, failed to react to this medication nor was the eruption affected. The view is put forward that these reactions are due to the liberation of streptococcal toxin by the action of the sulfamides on latent foci of infection and are not examples of drug fever.—H. W. BARBER. *Lancet*, 238 (1940), 583. (W. H. H.)

Sulfur Compounds (Organic) in Rheumatism—Mechanism of Action of. A discussion.—H. SIEBURG. *Deut. Med. Wochschr.*, 65 (1939), 924–925. (L. K.)

Theophylline and Its Derivatives—Use and Abuse of. A general review of theophylline and certa n of its derivatives, particularly aminophylline, with respect to the following clinical uses: (*a*) as diuretics; (*b*) effect on abnormalities of respiration; (*c*) effect on coronary arteries, anginal pain and coronary thrombosis; and (*d*) influence on the electrocardiogram. Something of the composition of the commonly employed derivatives of theophylline is given along with their untoward actions. Some important symptoms produced by these drugs in sensitive patients are: (*a*) throbbing type of headache; (*b*) fullness in the head, vertigo or lightheadedness; and (*c*) nervousness of a subjective type and cardiac palpitations with precordial pain or a sensation of oppression. Several cardiac cases are described in detail and their electrocardiograms reproduced in the article. A discussion of the report by several authorities is abstracted and appended.—ALPHONSE MCMAHON and ROBERT A. NUSSBAUM. *Southern Med. J.*, 33 (1940), 1127–1140. (W. T. S.)

Vitamin B—Use of, in the Treatment of Sydenham's Chorea. Vitamin B deficiency was considered as a possible contributing cause in the development of cardiac involvement and the hyperirritability of the nervous system in Sydenham's chorea. Twenty patients were treated with vitamin B and fever therapy. Six or seven fever treatments were given at three- or four-day intervals, maintaining the temperature at 104° F. or over for about 2 hours. Every treatment is followed by the injection of 10 to 15 mg. of thiamine chloride intravenously while the temperature still remains high. The patients also received a vitamin B complex preparation orally 3 times daily. When vitamin B therapy was added, advanced cardiac conditions were found to be no contraindication to the fever treatment. Usually a change for the better in the cardiac condition was noted at the end of the treatment. Improvement was also noted in the behavior disturbances seen in most of the patients; this occurred concomitantly with change for the better in chronic manifestations.—S. STONE. *New Engl. J. Med.*, 223 (1940), 489; through *Abbott Abstract Service*, (1941), No. 795. (F. J. S.)

Vitamin B and Dextrose Solution—Use of, in the Treatment of Vomiting of Pregnancy. Women with excessive vomiting are starved in proteins, carbohydrates, fats, minerals and vitamins. The most serious vitamin deficiency that develops is that of vitamin B complex which in some instances results in a polyneuritis differing in no way from that found in beriberi. In outlining a treatment for such cases the author gives from 3 to 9 gr. of pentobarbital by rectum after the lower bowel has been emptied by enemata. The dose is repeated often enough to keep the patient in a somnolent condition without the use of any opiates. An initial hypodermoclysis of 1500 cc. of normal saline solution is followed by sufficient daily amounts to help maintain the fluid balance. An intravenous drip of 5 or 10% glucose is given at the rate of thirty to forty drops a minute, and is repeated at intervals of from eight to twelve hours. In addition a nutritious fluid diet, combined with large doses of yeast concentrate in milk is supplied. Administration is made by means of the nasal tube.—F. C. IRVING. *Virginia Med. Monthly*, 67 (1940), 717; through *Abbott Abstract Service*, (1941), No. 790. (F. J. S.)

Vitamin B_1—Acrodynia Treated with. A certain number of the symptoms of acrodynia are not without analogy to those of beriberi and pellagra, notably the digestive manifestations, cutaneous eruptions, muscular hypotonus, edema and vascular disturbances of the extremities. This resemblance has caused the author to treat four infants possessing this syndrome with doses of vitamin B_1 higher than that habitually employed. The vitamin was given in various forms: cereal, extract and tablets. All forms aided in the treatment. The results seemed encouraging but it is impossible to draw other conclusions.—G. FORSYTH. *Med. J. Australia*, 26 (1939), 751; through *Presse méd.*, 40–41 (1940), 50. (W. H. H.)

Vitamin B_1 Dosage in Humans. A discussion.—ALWIN HILDEBRANDT. *Deut. Med. Wochschr.*, 65 (1939), 639–641. (L. K.)

Vitamin B_1—Relation of, to Pregnancy. Thiamine chloride has been shown to be a dietary factor essential to the normal human adult, and literature indicates that the requirement for the vitamin is definitely increased in pregnancy. Many subclinical deficiencies have been mislabeled as direct results of the gestation itself. Not only have the toxemias of late pregnancy been explained on a basis of thiamine deficiency, but they have been shown to be amenable to vitamin B_1 therapy. Animal experiments have demonstrated the inimical effect of a vitamin B_1 deficiency upon the reproductive cycle. Evidence has accumulated to show that the placenta acts only as a filter in the maternal-fetal transference of this substance. In a study of 91 pregnant women records show that one-third of them were not receiving an adequate amount of vitamin B_1. There was some positive correlation between the inadequate intake and deficiency symptoms such as excessive nausea and vomiting, fatigue and paresthesias.—P. F. WILLIAMS, G. C. GRIFFITH and F. G. FRALIN. *Am. J. Obstet. Gynecol.*, 40 (1940), 181; through *Abbott Abstract Service*, (1941), No. 772. (F. J. S.)

Vitamin C Association with Calcium in the Treatment of Juvenile Acne. Juvenile acne is frequently caused by a deficiency state and hypovitaminosis; mostly noted in men at the age of puberty and in women during the premenstrual period. Having produced cure of acne of certain subjects treated by oral administration of vitamin C for a failure of general state, the author has tried this treatment in 25

acne subjects; certain ones receiving each day an intravenous injection of 40 or 50 mg. of vitamin C and 5 or 10 cc. of calcium gluconate 10%, others received daily an intramuscular injection of 25 mg. of vitamin C and 2 cc. of calcium gluconate along with 20 drops of a 5% solution of ascorbic acid. All eruptions were reabsorbed and the cases cured. The author attributes this cure to a better cutaneous functioning, consequented by the development of hormonal correlations between the skin and the endocrine glands.—M. LOZZA. *Minerva medica*, 30 (1939), 235; through *Presse méd.*, 36–37 (1930), 46. (W. H. H.)

Vitamin C Nutrition in Pellagra. Pellagra is often accompanied by a vitamin C deficiency. The therapeutic regimen in this condition should include a diet adequate in all the essential food factors, supplemented by ascorbic acid when a deficiency of this substance is demonstrated.—G. A. GOLDSMITH, A. T. OGAARD and D. F. HOWE. *Am. J. Med. Sci.*, 200 (1940), 244–248. (B. H.)

Vitamin K—Absorption of Water Soluble, without the Aid of Bile Salts. The authors have shown that the water soluble hydrochloride of 4-amino-2-methyl-1-naphthol is readily absorbed and that bile salt medication, which tends to create nausea in the patient, is not necessary.—H. P. SMITH and CHARLES A. OWEN. *J. Biol. Chem.*, 134 (1940), 783. (F. J. S.)

Vitamin K Deficiency—Plasma Coagulation Time as a Simple Test for. A technique for measuring the plasma coagulation time of recalcified oxalated blood plasma has been outlined which is a modification of Howell's measurement of prothrombin time. The technique of the test is simple to carry out and gives results which are sufficiently constant to be reliable for clinical use. No unstable tissue extracts are required. Normal standards of plasma coagulation time as a test for vitamin K deficiency have been shown in a study of the blood of 149 chicks, eighty-five of which were vitamin K deficient. The test has proved satisfactory in the diagnosis and treatment of jaundiced patients with vitamin K deficiency.—G. CHENEY. *Am. J. Med. Sci.*, 200 (1940), 327–337. (B. H.)

Vitaminized Tobacco. Tobacco such as that for the manufacture of cigarettes or cigars is impregnated with thiamin chloride (suitably by use of a spray of an aqueous solution) for producing therapeutic effects.—ANDREW VISCARDI. U. S. pat. 2,198,188, April 23, 1940. (A. P.-C.)

Vitamins D_2 and D_3 and A.T. 10 in Congenital Thyroid and Parathyroid Deficiency. A case of congenital thyroid and parathyroid deficiency associated with tetany and epilepsy is described. Successful treatment of the tetany had no effect on the symptoms of thyroid deficiency, nor did treatment of the thyroid deficiency alone influence the developments of tetany. The tetany was therefore independent of the thyroid deficiency with its partial cretinism. When the blood calcium rose above 7 mg. per 100 cc., the epileptic fits and tetany disappeared. When the blood calcium fell below this level, tetany and epileptic fits reappeared. The parathyroid deficiency was controlled by the oral administration of vitamin D_2 (calciferol) in oil, 500,000 units weekly. Despite the continued administration of this large dosage of vitamin D_2, or comparable dosages of related substances, for nearly six years no signs of hypervitaminosis D have appeared. The German preparation A.T. 10 was effective in controlling the parathyroid deficiency, but it appeared less reliable in its action than vitamin D_2. Vitamin D_3 was simply equivalent to vitamin D_2 in controlling the parathyroid deficiency.—H. P. HIMSWORTH and M. MAIZELS. *Lancet*, 238 (1940), 959. (W. H. H.)

MODERN REMEDIES

SYNTHETICS

Allergosil (Endocrines-Spicer Ltd., Watford, Herts) is ethylene disulfonate in high dilution. It is used in certain cases of asthma. The dose is 2 cc. injection. It is supplied in ampuls of 2 cc.—*Australasian J. Pharm.*, 21 (1940), 857. (A. C. DeD.)

Calcium Mandelate (The Upjohn Co., Kalamazoo, Mich.) contains in each 8.45-gr. tablet of calcium mandelate, $(C_6H_5.CHOH.COO)_2Ca$, the equivalent of 0.5 Gm. ($7\frac{1}{2}$ gr.) of mandelic acid. It is used in infections of the urinary tract due to *Streptococcus faecalis, Escherichia coli* and organisms of the *Proteus, Salmonella* and *Shigella* groups. Calcium mandelate is tasteless and less likely to produce gastric discomfort, nausea or vomiting. The dose is six tablets four times daily; and it is supplied in bottles of 100 and 1000 tablets.—*Amer. Professional Pharm.*, 6 (1940), 657. (F. J. S.)

Calheptose (N. V. Brocades-Stheeman & Pharmacia, Meppel) is a calcium preparation for injection consisting of calcium-*d*-glucoheptonate. It is found on the market in ampuls of various sizes and concentrations from $12\frac{1}{2}\%$ to 25%.—*Pharm. Weekblad*, 76 (1939), 1260. (E. H. W.)

Gluco-Cal (A. Düll, Techn.-bakteriolog. Laboratorium, Hamburg) is calcium gluconate marketed as a granulated powder and in the form of tablets. It is used in calcium therapy.—*Pharm. Zentralhalle*, 80 (1939), 648. (N. L.)

Hykinone (Abbott Laboratories, North Chicago, Ill.) consists of 2-methyl-1,4-naphthohydroquinone-3-sodium sulfonate with sodium bisulfite made isotonic with sodium chloride and chemically pure water. It is indicated in those cases requiring vitamin K therapy, where the usual oral method of administration is difficult or impossible; and it provides a water-soluble injectable substance, having vitamin K action. The initial dose is 0.5 cc. If prothrombin level shows no improvement within 12 hours, an additional dose of same size may be given, repeated at 12-hour intervals. In severe cases, 1 cc. may be given daily as needed. Hykinone is supplied in boxes of 6 and 25 ampuls (1-cc.).—*Amer. Professional Pharm.*, 6 (1940), 652. (F. J. S.)

"Hypoloid" Mersalyl (Burroughs Wellcome & Co.) consists of a 10% solution of the sodium salt of salicyl-(γ-hydroxymercuri-β-methoxypropyl)-amide-O-acetic acid with 5% theophylline to lend synergism and stability to the preparation. It is a valuable diuretic in edemas.—*Indian Med. Gaz.*, 75 (1940), 576. (W. T. S.)

Merckojod (E. Merck, Darmstadt) is an aqueous solution of a concentrated form of colloidal iodine. The preparation, which contains 6% of active iodine, is prepared by a special process and is marketed in 20-cc. quantities.—*Pharm. Zentralhalle*, 80 (1939), 634. (N. L.)

Metamucil-2 (G. D. Searle & Co., Chicago, Ill.) is a highly refined and concentrated vegetable mucilloid prepared from mucilaginous portion of the seed of the psyllium group (*Plantago ovata* Forsk) and held in dispersion with equal amount of specially prepared dextrose. It is indicated in the treatment of constipation, mucous colitis, antonic colitis, ucerative colitis and peptic ulcer. The dose is a rounded teaspoonful stirred into a glass of water, milk or fruit juice, followed by an additional glass of liquid. Metamucil-2 is supplied in 4-oz., 8-oz. and 1-lb. containers.—*Amer. Professional Pharm.*, 6 (1940), 655. (F. J. S.)

Methedrine (Burroughs Wellcome and Co. London and Sydney) is the dextrorotatory isomer of *N*-methyl-β-phenylisopropylamine. It is used in

cases of nacrolepsy and in depressed psychopathic states. The dose is prescribed by the physician. It is supplied as "Tabloid" Methedrine Hydrochloride in bottles of 25 and 100.—*Australasian J. Pharm.*, 21 (1940), 857. (A. C. DeD.)

Negatan (Eli Lilly and Company, Indianapolis, Ind.) is a highly acid chemical compound which has protein precipitating power, bactericidal action and styptic effect; and is intended for topical application only in the treatment of cervicitis, cervical erosion, vaginal ulceration and *Trichomonas vaginalis* vaginitis. It is supplied as follows: solution, an aqueous solution containing 45 to 49 Gm. Negatan in 100 Gm. is available in 4-oz. bottles; suppositories, 10%, each suppository containing 0.5 to 0.55 Gm. Negatan, are available in boxes of six.—*Amer. Professional Pharm.*, 6 (1940), 653. (F. J. S.)

Neo-Röntyum (Schering A.-G., Berlin) contains 94% of barium sulfate and 6% of a protective colloid. It is used in X-ray diagnosis.—*Pharm. Zentralhalle*, 80 (1939), 634. (N. L.)

Neuropax (Chupha K. G., Chem.-Pharm. Labor. Hass & Co., Nürnberg) is a sedative and soporific marketed in the form of tablets and consists of phenylallylbarbituric acid, bromoisovalerianyl-urea, benzyl urea and dimethylaminophenazon.—*Pharm. Zentralhalle*, 80 (1939), 634. (N. L.)

Neuro-Trasentin (Gesellsch. f. Chemische Industrie, Basel) contains trasentin and phenyl-ethylbarbituric acid. It is marketed in the form of tablets and is indicated as an antisposmodic and soporific.—*Pharm. Zentralhalle*, 80 (1939), 634. (N. L.)

Nicotinamide (E. R. Squibb & Sons, 745 Fifth Avenue, New York, N. Y.) is the amide of nicotinic acid, which can be administered in larger amounts without peripheral vasodilation incident to equal amounts of plain acid. It is indicated in the treatment of acute pellagra. The dose is: orally, 100 to 200 mg. daily for adults, 100 mg. for children 6–12 years, 50 mg. for children 2–6 years, in divided doses; parenterally, adults 100 mg. daily, up to 50 mg. daily for children according to weight. Nicotinamide is supplied as an elixir in pints, representing 400 mg. nicotinic acid amide per oz., in wine; also as a solution for parenteral administration (5-cc. vials) representing 100 mg. per cc.; and capsules containing 50 mg. each, in bottles of 100.—*Amer. Professional Pharm.*, 6 (1940), 790. (F. J. S.)

Nuporals (Cibra Pharmaceutical Products, Inc., Summit, N. J.) contain in each nuporal one mg. of nupercaine, a local anesthetic which has been characterized by its non-narcotic and prolonged action. Nuporals have been found to allay pain and tenderness of the mucous membrane of the throat and mouth as well as to diminish pharyngeal reflexes. The dosage is as follows: adults, one nuporal dissolved in the mouth, not oftener than every two hours (not to exceed 8 in 24 hours); for children over 5 years, one-half or one nuporal dissolved in the mouth, not oftener than every three hours (not to exceed 6 in 24 hours); not advisable for children under 5 years. Nuporals are supplied in boxes of 15 and in bottles of 100.—*Amer. Professional Pharm.* 6 (1940), 589. (F. J. S.)

Ortedrin (Société Parisienne d'Expansion Chimique Specia, Paris) is indicated in physic depression and related conditions. It is marketed in the form of tablets, each containing 0.005 Gm. of phenyl-1-amino-2-propane.—*Pharm. Zentralhalle*, 80 (1939), 634. (N. L.)

Paredrine Hydrobromide Ophthalmic 1% with Boric Acid (Smith, Kline & French Laboratories, 105 N. Fifth Street, Philadelphia, Pa.) is *p*-hydroxy-*α*-methylphenethylamine hydrobromide, 1% preserved, but made isotonic with 2% boric acid. It is indicated as adjuvant to atropine or homatropine, to help induce cycloplegia for refraction; and it acts alone as a mydriatic for general diagnostic purposes. The dose for refracting is 1 to 2 drops of 4–5% homatropine solution, followed three minutes later by 1 to 2 drops of paredrine ophthalmic; for children, substitute 1 drop of 1% atropine for homatropine. It is supplied in half-ounce bottles.—*Amer. Professional Pharm.*, 6 (1940), 790. (F. J. S.)

Pharmaneurine (N. V. Brocades-Stheeman & Pharmacia) is crystallized vitamin B_1, (aneurine), occurring in tablet form of 2 mg. or in ampuls of 2 mg. per cc. and as *Pharmaneurine Forte* in 10 mg. per cc.—*Pharm. Weekblad*, 76 (1939), 1260. (E. H. W.)

Pharmedrine (N. V. Brocades-Stheeman & Pharmacia, Meppel) is *β*-phenylisopropylaminesulfate that is obtainable in tablet form of 0.005 and 0.010 Gm. It is found on the market in tubes containing ten tablets or in bottles containing 50 and 100.—*Pharm. Weekblad*, 76 (1939), 1260. (E. H. W.)

Phedracin, the hydrochloride of trimethoxybenzyl-dihydroimidazole, is chemically related to adrenaline, ephedrine and mescaline. It forms white crystals which are readily soluble in water at 185° F. It is a synthetic sympathomimetic substance, with an intense and prolonged action. The indications for its use are similar to those of other sympathomimetic drugs, *e. g.*, ephedrine. It is of special use where a powerful pressor effect is desired as in spinal anesthesia, and postoperative shock, and in cases where patients no longer react to, or are intolerant of, ephedrine as in the treatment of asthma. Phedracin has approximately the same toxicity as ephedrine, but for equal doses it is superior to ephedrine. It may be administered orally, intramuscularly or intravenously. The usual doses are intravenous 1 ampul (0.1 Gm.), intramuscular 1 to 2 ampuls, oral $^1/_2$ to 2 tablets (0.1 to 0.4 Gm.). Phedracin is supplied in boxes of 5 and 20 1-cc. ampuls each containing 0.1 Gm., and tubes of 10 divisible tablets each containing 0.2 Gm.—*Quart. J. Pharm. Pharmacol.*, 12 (1939), 790. (S. W. G.)

Prokayvit and Prokayvit-Oral (The British Drug Houses Ltd., London) is 2-methyl-1,4-naphthoquinone. Prokayvit Oral is diacetyl-2-methyl-1,4-naphthohydroquinone. They are used in cases of obstructive jaundice, sprue and coeliac disease, liver disorders, neonatal hemorrhage, hypovitaminosis-k. Prokayvit is supplied in boxes of 6 x 5 mg. in 1-cc. ampuls. Prokayvit Oral tablets in bottles of 25 x 10 mg. and 100 x 10 mg.; solution in oil in capsules in boxes of 5 x 10 mg. intended specially for infants, the point of the capsule to be cut off with scissors, the contents squeezed out and diluted with olive oil to about one teaspoonful per capsule; or, alternatively, added undiluted to the food. Prokayvit is administered by intramuscular injection in 5 mg. or more doses, according to the disease.—*Australasian J. Pharm.*, 22 (1941), 53. (A. C. DeD.)

Proloid (The Maltine Co., 21 West St., New York, N. Y.) is a standardized thyroid extract prepared from fresh thyroid glands and containing the thyroid globulin. It is biologically standardized and each grain is equivalent to 169 micrograms of crystallized thyroxin when tested on thryoidectomized rats. It exerts all the therapeutic effects of the thyroid hormone and may be used in every case where such medication is desirable. It is given in dosages as indicated by disorder. Proloid is supplied in $^1/_4$-gr., 1-gr. and 5-gr. tablets, in bottles of 100 and 500.—*Amer. Professional Pharm.*, 6 (1940), 655. (F. J. S.)

Proseptine (N. V. Brocades-Stheeman & Pharmacia) is an intestinal antiseptic containing bismuth

oxyquinolinate and activated charcoal.—*Pharm. Weekblad*, 76 (1939), 1260. (E. H. W.)

Psothanol (Ferme, Paris) (Bengue and Co. Ltd., Alperton, Middlesex) is bismuth meta, anhydro-oxyarsenodroxy-pyridinebutane-dioique. It is used in cases of psoriasis and parakerotosis. The dose for intramuscular and intravenous injections is 1 ampul daily, in series of 20. It is marketed in boxes of 10 x $3^1/_2$-cc. ampuls.—*Australasian J. Pharm.*, 22 (1941), 53. (A. C. DeD.)

Pyridoxine Hydrochloride (McNeil Laboratories, Inc., 2900 N. 17th St., Philadelphia, Pa.) contains in each cc. pyridoxine hydrochloride (vitamin B_6 hydrochloride) 10 mg. in sterile normal saline solution. It is indicated in vitamin B_6 deficiencies, certain pellagric conditions which do not respond to nicotinic acid, riboflavin or thiamine therapy; also of value in the treatment of muscular dystrophics. The dose is determined by the physician in order to meet the requirements of the particular case. Pyridoxine hydrochloride is supplied as 1-cc. ampuls in boxes of 6.—*Amer. Professional Pharm.*, 6 (1940), 657. (F. J. S.)

Sulpho-Merthiolate Surgical Powder (Eli Lilly and Co., Ltd., Basingstoke) is sodium *p*-ethylmercuri-thiophenylsulfonate (1:1000 concentration in base of kaolin, sodium bicarbonate, magnesium, stearate and benzoin). Topical application in the treatment of infected wounds and ulcers, vaginal infections, etc. It is supplied in $1^1/_2$-oz. containers.—*Australasian J. Pharm.*, 22 (1941), 53. (A. C. DeD.)

Thyrogan is the thyroid-stimulating hormone obtained from the anterior lobe of the pituitary gland, in a pure and standardized form. At present the standard, in terms of animal units, is that amount of thyrogan, which, given in a series of five injections, will double the weight of the thyroid of a batch of immature guinea pigs in five days. Thyrogan is standardized to contain fifty guinea-pig weight units per ampul. It is indicated in patients suffering from lowered metabolic activity, especially when associated with obesity. It is also indicated in Simmond's disease, and probably will be found of use in cretinism and myxoedema. Thyrogan is administered by intramuscular injection, and doses of 50 guinea-pig weight units can be given twice or four times a week. Thyrogan is issued in boxes of 6 dry filled ampuls each containing 50 guinea pig weight units, and 6 ampuls of sterile distilled water containing 0.5% of phenol, for the preparation of fresh solutions.—*Quart. J. Pharm. Pharmacol.*, 12 (1939), 791. (S. W. G.)

Venesetic is sodium thioethamyl (sodium isoamylethyl-thiobarbiturate) prepared for the production of surgical anesthesia and basal narcosis by intravenous injection. It is a yellow-colored powder and is supplied in hermetically sealed ampuls each containing 1.5 Gm., together with ampuls of 20 cc. of sterile distilled water. The powder should be dissolved in the water immediately before use, making a 7.5% solution. This is the most suitable strength, causing less irritation and pain than a stronger solution, if it escapes into the surrounding tissue. The injection is made at a rate equivalent to 100 mg. (*i. e.*, 1.3 cc. of 7.5% solution) every five seconds until unconsciousness occurs. Usually 4 to 8 cc. are required initially. The injection is continued if there is a return of reflex activity. The induction is smooth, and the patient regains consciousness from ten to twenty-five minutes after administration of an average dose. Venesetic can be given to children and to diabetics, but not to patients with impairment of liver function or to patients receiving sulfonamide preparations.—*Quart. J. Pharm. Pharmacol.*, 12 (1939), 792. (S. W. G.)

SPECIALTIES

Acidogen (Abbott Laboratories, North Chicago, Ill.) is a preparation of glutamic hydrochloride and each 5-gr. capsule is equivalent to approximately 10 minims of dilute hydrochloric acid U. S. P. It is a more stable product, non-hydrolyzable in handling and with no unpleasant after-effects; and it represents a convenient form for administering hydrochloric acid. Free hydrochloric acid is liberated to the stomach and it should not be given when a partial obstruction of the esophagus is present. The dose is one capsule or more shortly after beginning of the meal. Acidogen is supplied in bottles of 100 and 500 5-gr. capsules.—*Amer. Professional Pharm.*, 6 (1940), 791. (F. J. S.)

Allisatin (Sandoz Products, London) is a concentrated preparation of fresh garlic, rendered odorless and tasteless by fixation on highly activated charcoal. It is used in cases of diarrhea in all its forms. The dose for adults is 2–4 tablets three times daily and for children 2–4 tablets each day. It is supplied in bottle of 30, 100 and 250 tablets.—ANON. *Australasian J. Pharm.*, 22 (1941), 52. (A. C. DeD.)

Asmadyn (John Wyeth and Brother Ltd., London) come in 5-grain tablets, containing $^1/_2$ grain ephedrine, with potassium bromide, phenazone, caffcine, theophylline and grindelia. Used in cases of asthma, emphysema, bronchitis, spasmodic and chronic cough and dyspnea. The dose is one or two tablets three times daily or when an attack is imminent. It is supplied in bottles of 30 tablets.—ANON. *Australasian J. Pharm.*, 22 (1941), 52. (A. C. DeD.)

Biad (McNeil Laboratories, Inc., 2900 N. 17th Street, Philadelphia, Pa.) contains in each globular dark yellow capsule not less than 3000 I. U. of vitamin A, 320 I. U. of vitamin D (corresponding approximately to one teaspoonful of U. S. P. cod liver oil), together with purified bile salts, $1^1/_4$ gr. and dicalcium phosphate. The vitamins are protected against deterioration by a hydrogenated oil vehicle. The synergistie action of the bile salts and the fat-soluble vitamins is effective in cholecystitis, cholangeitis and other conditions interfering with the flow of bile into the intestines where vitamin absorption is impaired. Other indications include hepatic insufficiency, restricted diets and pregnancy; and the preparation has proved itself to be extremely valuable as a prophylactic treatment for the common cold. The dosage is one or two capsules three times a day after meals. Biad is supplied in bottles of 100, 500 and 1000 capsules.—*Amer. Professional Pharm.*, 6 (1940), 791. (F. J. S.)

Biomines (Frederick Stearns Co., Detroit, Mich.) contains in each fluidounce not less than: vitamin A, 20,000 U. S. P. units; vitamin D, 2000 U. S. P. units; vitamin B_1 (thiamine hydrochloride), 400 U. S. P. units; vitamin G (B_2) (riboflavin), 200 gammas; and iron and ammonium citrates (green), 4 grains. It is used as a dietary supplement in deficiency states; and the dose for adults and children is one teaspoonful three times daily after meals. Biomines is a liquid and is supplied in 16-oz. bottles.—*Amer. Professional Pharm.*, 6 (1940), 722. (F. J. S.)

Cepacol (The Wm. S. Merrell Co., Cincinnati, O.) consists of cetyl pyridinium chloride (1:4000) and sodium phosphate, 0.5%, in a refreshing, pleasantly flavored solution. It is indicated in the prophylaxis and treatment of infections of the throat, mouth and nasopharynx; as a spray or gargle in inflammation and irritation of the throat; post-tonsillectomy throat hygiene; as a spray or wash following exodontia or other dental instrumentation. It may be used full strength or diluted with one to three parts of water, as a gargle, spray or direct application. For nasal lavage, use equal parts

of the solution and warm isotonic saline solution. Cepacol is supplied in pint and gallon bottles.—*Amer. Professional Pharm.*, 6 (1940), 723. (F. J. S.)

Dekadexolin (Glaxo Laboratories Ltd., Greenford, Middlesex) contains in each 1-cc. ampul 60,000 international units of vitamin A and 10,000 of vitamin D, in sterile oil solution. It is used in cases of local and general infections, pyrexia, sloughing, bed sores, etc. The dose is 1 cc. daily every other day, or at longer intervals by deep intramuscular injection. It is supplied in boxes of 6, 12 and 50 x 1-cc. ampuls.—ANON. *Australasian J. Pharm.*, 22 (1941), 52. (A. C. DeD.)

Felamine (Sandoz Products, London) is an association of pure cholic acid with hexamine. It is used in cases of choleratic and disinfectant of the biliary tract. The dose is 4–8 tablets a day. It is supplied in bottles of 50 and 250 tablets.—*Australasian J. Pharm.*, 22 (1941), 52. (A. C. DeD.)

Fersolate (Glaxo Laboratories Ltd., Greenford, Middlesex) is ferrous sulfate, exsiccated, 3 grains per tablet. It is used in cases of iron deficiency and anemia. Each tablet supplies 1 grain of ferrous iron, with $^1/_{100}$ grain each of copper and of manganese. Three tablets daily produce the optimal hemoglobin increase of 1% to 2% daily. It is to be taken immediately after meals. It is supplied in bottles of 100, 500 and 1000 tablets (sugar coated).—*Australasian J. Pharm.*, 22 (1941), 52. (A. C. DeD.)

Fibrosan (John Wyeth and Brother Ltd., London) comes in 6-grain tablets, each containing phenyl salicylate, sodium salicylate, acetylsalicylic acid and strychnine sulfate. It is used for the relief of pain in rheumatism, arthritis, fibrositis, headaches, dysmennorrhea and influenza. The dose is three tablets two or three times daily after meals. It is supplied in bottles of 75 tablets.—*Australasian J. Pharm.*, 22 (1941), 52. (A. C. DeD.)

Haemozel Suppositories (Labor., "Zely" der Kreuzberg-Apotheke, Berlin) contain as their active ingredients balsam of Peru, zinc ozide, bismuth subgallate, resorcinol and ethyl *para*-aminobenzoate. They are indicated in the treatment of hemorrhoids.—*Pharm. Zentralhalle*, 80 (1939), 634. (N. L.)

"Hypoloid" Normal Saline Solution (Sterile) (Burroughs Wellcome and Co., London and Sydney) is for use with "Hypoloid" Digoxin, which is required to be diluted with ten times the volume of sterile normal saline solutions before injection. It is used in cases of cardiac disorders. It is marketed in boxes of 6 x 10-cc. ampuls; also in a combined packing containing 6 x 1-cc. ampuls "Hypoloid" Digoxin, with 6 x 10-cc. ampuls of the saline solution.—*Australasian J. Pharm.*, 22 (1941), 52. (A. C. DeD.)

Iodine-Camphor Salve (F. Witte, Chem. Fabrik, Rostock) is a fat-free salve containing lipoid-soluble iodine, lecithin and 5% camphor. It is recommended in the treatment of frostbite, arthritis and pleuritis.—*Pharm. Zentralhalle*, 80 (1939), 649. (N. L.)

Mucilose Granules Improved (Frederick Stearns & Company, Detroit, Mich.) consists of 60% of mucilose (hemicellulose from the seed of *Plantago loeflingii*) and 40% of dextrose; and it is indicated for those who need mucilose in less concentrated form (diseases of the gastro-intestinal tract where diarrhea is a symptom) and in ulcers, hemorrhoids (where there is no tumor or mechanical obstruction. in pregnancy, etc. The dose is one to two teaspoonfuls, once or twice daily and it is best administered by depositing granules on tongue and swallowing with a full glass of water, milk or fruit juice. Mucilose Granules Improved is supplied in 4-oz. containers.—*Amer. Professional Pharm.*, 6 (1940), 791. (F. J. S.)

Nicolexin (The Upjohn Company, Kalamazoo, Mich.) is prepared from vitamin-rich extracts of yeast and liver supplemented with nicotinic acid amide, riboflavin and thiamine chloride; and each capsule contains approximately: nicotinic acid amide, 20 mg.; vitamin G (B_2), 50 Sherman Units; vitamin B_1, 100 I. U. The extracts of yeast and liver supply the known demonstrable factor of the vitamin B complex including 40 Jukes-Lepkovsky Units of filtrate factor and 100 gammas of vitamin B_6. It is used in frank pellagra and prepellagrous states and the usually associated vitamin B_1 and B_2 complex deficiencies other than the pellagra preventive factor deficiency. The dose for adults and children is four capsules one to three times daily. Nicolexin is supplied in bottles of 50 and 500 capsules.—*Amer. Professional Pharm.*, 6 (1940), 727. (F. J. S.)

Percainal Suppositories (Ciba, A.-G., Berlin-Wilmersdorf) contain percaine, bismuth vioform, isarol and extract of witch hazel. It is recommended in the treatment of rectal fistulas, hemorrhoids, etc.—*Pharm. Zentralhalle*, 80 (1939), 684. (N. L.)

Progynon Salve (Schering A.-G., Berlin) is marketed in tubes of 25 Gm. containing 2.5 mg. estradiol in a neutral, non-irritating ointment base. It is indicated in ovarian therapy.—*Pharm. Zentralhalle*, 80 (1939), 635. (N. L.)

Rheuma Delmin (J. H. Schaub, Delmenhorst) is an extract consisting chiefly of rhubarb, triticum and juniper. It is recommended in the treatment of gout, rheumatism, neuralgia, etc.—*Pharm. Zentralhalle*, 80 (1939), 635. (N. L.)

Rythmin (The Venomin Company, Venice, Florida) is a clear, colorless, aqueous solution of the active substances obtained from corals and copperheads; and each cc. represents 200 micrograms of active principle. It is an anticonvulsant and is used in the treatment of epilepsy and other convulsive disorders, also in neurasthenia. The dose is as follows: intravenously, 100 to 500 micrograms, beginning with $^1/_2$ cc., increasing by $^1/_2$ to 1 cc. to a total of 3 cc. within one month. Children, one-half the above dosage. Rythmin is supplied in 5-cc. vials.—*Amer. Professional Pharm.*, 6 (1940), 652. (F. J. S.)

Ryzamin-B (No. 2) (Burroughs Wellcome & Co., Inc. (U. S. A.), 9 E. 41st St., New York, N. Y.) is a palatable, golden brown, syrupy extract of rice polishings to which has been added thiamine hydrochloride (vitamin B_1), riboflavin (vitamin B_2, G, or lactoflavin) and nicotinic acid and each gram contains 400 international units (U. S. P. units) of vitamin B_1 (thiamine), 160 Sherman-Bourquin units (400 micrograms) of vitamin B_2 (riboflavin), 100 micrograms of vitamin B_6, 8 mg. of nicotinic acid and 50 Jukes-Lepkovsky units of the filtrate factor, as well as other components of the vitamin B complex. It is indicated in the treatment of prophylaxis of vitamin B complex deficiency, a condition commonly associated with incomplete or unbalanced diets during pregnancy, childhood, gastro-intestinal diseases, alcoholism or prolonged fever. Ryzamin-B (No. 2) is supplied in collapsible tubes of 2 oz. or 8 oz. and a special measuring spoon (1 Gm.) is included with each package.—*Amer. Professional Pharm.*, 6 (1940), 657. (F. J. S.)

Sadec (A.-G. "Sadec," Abt. für Medizin und Pharmazie, Oberarth (Schweiz)) consists chiefly of sucrose, dicalcium phosphate, calcium glycerophosphate, calcium lactate, magnesium glycero-

phosphate, lecithin, saccharated ferric oxide, ferrous carbonate, calcium gluconate, reduced iron, dibasic sodium phosphate and a small quantity of copper sulfate. It is recommended as a tonic and nervine.—*Pharm. Zentralhalle*, 80 (1939), 659. (N. L.)

Susto (Frederick Stearns & Co., Detroit, Mich.) contains in each capsule ferrous gluconate 3 gr., thiamine hydrochloride (vitamin B_1) 50 I. U. and liver extract 3 gr. (derived from 60 gr. of fresh liver). It is indicated in the treatment of anemias caused by a deficiency of iron, and malnutrition resulting from inadequate or improper food intake; and from increased demands for iron and vitamins as in pregnancy, avitaminosis, protracted infections such as tuberculosis, arthritis, nephritis, etc. The dose is as follows: infants, one capsule in food, three times daily; children, one or two capsules three times daily after meals; adults, two capsules 3 or 4 times daily after meals. Susto is supplied in bottles of 100 and 500 capsules.—*Amer. Professional Pharm.*, 6 (1940), 657. (F. J. S.)

Testoviron Salve (Schering A.-G., Berlin) contains in each 25 Gm., 50 mg. of pure, testosterone in a composite ointment base. It is indicated in testosterone therapy.—*Pharm. Zentralhalle*, 80 (1939), 685. (N. L.)

Theogardenal (May and Baker (India), Ltd., 11 Clive Street, Calcutta) consists of theobromine 5 grains and phenobarbital $^1/_2$ grain. It is said to be superior to caffeine in its action on the muscle, kidney and heart, with the latter drug helping to reduce arterial hypertension. This combination has been found especially valuable in the treatment of high blood pressure and diseases of the menopause.—*Indian Med. Gaz.*, 75 (1940), 512. (W. T. S.)

Trineral Ovaltablets (Trineral, G. m. b. H., München) contain in each tablet, magnesium oxide hydrogel 0.04 Gm., acetylsalicylic acid 0.36 Gm. and starch sufficient to make 0.5 Gm. They are indicated in the treatment of rheumatism, ischias, migraine, grippe, influenza, etc.—*Pharm. Zentralhalle*, 80 (1939), 708. (N. L.)

Venomin (The Venomin Company, Venice, Florida) is a clear, colorless, aqueous solution of the active substance of moccasin venom, presenting per standard dosage of 0.05 cc. in "A" 5 micrograms, in "B" 25 micrograms and in "Forte" 100 micrograms. It is used as an analgesic and antiarthritic in nonspecific acute and chronic rheumatism, lumbago myalgia, sciatica, neuralgia and similar disorders. The initial standard dose, intradermally 0.5 cc., increased where necessary, is injected daily or every other day until results are obtained. The ointment is used topically, $^1/_8$ to $^1/_6$ of tube content per application. Venomin is supplied as follows: Venomin "A," 1- and 5-cc. vials; Venomin "B," 1- and 5-cc. vials; Venomin "Forte," 1-cc. vials; Venomin Ointment, containing 8 Gm. of active substance in $^1/_2$-oz. collapsible tubes; and Venomin Desiccated, 1-cc. vials with 1-cc. vials of diluent for restoration to strengths "A" and "B" and "Forte."—*Amer. Professional Pharm.*, 6 (1940), 727. (F. J. S.)

Viaben (Chem. Fabrik Schürholz, Köln-Zollstock) is a quinine preparation in tablet form and possessing a more highly reactive quinine action. It is indicated in the treatment of grippe, pneumonia, etc.—*Pharm. Zentralhalle*, 80 (1939), 635. (N. L.)

Zely-Nervin (Labor. "Zely" der Kreuzberg-Apotheke, Berlin) is a liquid preparation containing bromine and phosphorus salt, phenazon, lupulus, tincture of orange, oat and aromatic correctives. It is recommended as a nervine and tonic.—*Pharm. Zentralhalle*, 80 (1939), 660. (N. L.)

BACTERIOLOGY

Acetate of Sabadilla and Spirit of Quassia—Comparative Paraciticidal Action of. Acetate of sabadilla has long had repute as a parasiticide for head lice; Spirit of quassia entered the Swedish formulary in 1937. Their effectiveness was compared by tests on plant lice. The acetate of sabadilla was less active than its menstruum alone. Spirit of quassia was highly effective, but its alcohol content is rather high for use near the eyes. When prepared with diluted alcohol it was fully active, hence this change was recommended. Spirit of picrasma was also effective, so Lignum picrasmæ could be substituted for Lignum quassiæ. —O. LARRSON. *Farm. Revy*, 39 (1940), 552. (C. S. L.)

Agar Cup Plate Method—Studies with. II. The Effect of Blood on Mercury Antiseptics. Using a standardized agar cup plate technique, four mercury antiseptics (mercury bichloride, mercurochrome, metaphen and merthiolate) were studied in horse blood-agar mixtures. The blood content of the test media varied from 1% to 50%. The organism was *Staphylococcus aureus* (WP3 strain). All four mercury compounds showed a diminishing antiseptic effectiveness as the blood concentration was increased. The inactivation of the mercurials was expressed by the general formula $C = K^{-mz}$. The limits of activity of the mercurials indicated that these substances had no antiseptic properties at certain critical blood levels. The experimental data *in vitro* suggested that the mercury compounds could have no value in intravenous therapy. —S. B. ROSE and R. E. MILLER. *Am. J. Med. Sci.*, 199 (1940), 338–342. (B. H.)

Allergins—Preparation of Extracts of. This describes the method of preparing extracts of allergic substances (drugs, feathers, powders, etc.) for test solutions on allergic patients.—J. ERDOS. *Rev. Sud. Endocrin.*, 22 (1939), 736; through *Rev. Col. Farm. Nac.*, 6 (1939), 233. (G. S. G.)

Alumina Gel as an Adjunct to the Vaccine against Bovine Pest. The authors report that the addition of alumina gel to the formalized tissue emulsion which is employed as a vaccine against the bovine pest greatly reinforces it; the absorbed vaccine is shown to be 10 to 25 times superior to the ordinary vaccine; the difference is measured by the constancy of its effect. This result permits recognition of the possibility of presenting the antiseptic vaccine in a particularly active form, and of reducing the volume of the injected dose. The tissue pulp and the alumina gel are associated according to the law of mutual absorption of solids.—H. JACOTOT and E. ROUBAUD. *Acad. des Sci.*, March 4, 1940; through *Presse méd.*, 38–39 (1940), 440. (W. H. H.)

Amines—Production of, by Bacteria. III. The Production of Putrescine from l(+)-Arginine by Bacterium Coli Esch. in Symbiosis with Streptococcus Faecalis Sargent. The mixture of washed suspensions of *Bact. coli* Esch. and *Strep. fæcalis* Sargent has no effect upon the decarboxylation of *l*(+)-lysine, *l*(−)-histidine, *l*(+)-ornithine by the former or of *l*(−)-tyrosine by the latter. With *l*(+)-arginine, three reactions can occur; (1) decarboxylation of arginine to agmatine, (2) breakdown of arginine to ornithine and (3) decarboxylation of ornithine to putrescine. At p_H 4.0, only the first reaction occurs to any extent; at p_H 5.5, all three reactions occur, the ratio of the products depending upon the ratio of *Bact. coli/Strep. fæcalis* present. When these two organisms are grown in symbiosis, the activities of *Bact. coli* toward lysine, histidine and arginine at p_H 4.0 appear to be the same as those of the pure culture. Toward ornithine, the activity increases 250–300%; probably as a result

of the production of ornithine during growth. The organisms grown in symbiosis attack arginine at p_H 4.0 to produce agmatine and at p_H 5.5 to give, putrescine.—E. F. GALE. *Biochem. J.*, 34 (1940) 853. (F. J. S.)

p-Aminobenzoic Acid—Neutralization of Bacteriostatic Activity of Sulfonamides by. The bacteriostatic effect, as observed *in vitro*, of sulfanilamide, sulfapyridine and sulfathiazole on streptococci, pneumococci and staphylococci, respectively, is completely neutralized by *p*-aminobenzoic acid.—MAURICE LANDY and JURO WYENO. *Proc. Soc. Exptl. Biol. Med.*, 46 (1941), 59. (A. E. M.)

p-Aminobenzoic Acid—Use of, to Inhibit Sulfonamide Action in Bactericidal Tests. *p*-Aminobenzoic acid inhibits the antibacterial action of sulfathiazole but has no effect on pneumococcidal antibodies in fresh difibrinated blood.—ELIAS STRAUSS, JOHN H. DINGLE and MAXWELL FINLAND. *Proc. Soc. Exptl. Biol. Med.*, 46 (1941), 131. (A. E. M.)

Vi Antibody in Sera of Typhoid Patients and Carriers. Confirming the statements of Detre it was found that, by alternately exposing suspensions of *E. typhi* to typhoid O agglutinins and plating out the bacilli remaining unagglutinated, it was possible to select Vi cultures highly insensitive to O agglutinins; and further that, in the course of repeated washing with saline on the centrifuge, the selected cultures lost their flagella and, ceasing to clump with H agglutinins, reacted thereafter only with Vi antibodies. A number of sera, previously examined for Vi agglutinins, with two positive findings by the older "absorbtion" technique, were retested, in the presence of rigid controls, with the Vi specific suspensions. Vi agglutinins were now detected in the sera of 3 of 16 cases and of 6 of 8 carriers. In a new series, examined in view of these new results by the Detre method alone, positive results were obtained in 6 of 14 active cases and with 13 of 15 carriers. Summing the results of past and present work based on one or both methods, 6 of 14 severe and 9 of 26 milder cases of typhoid and 20 of 26 carriers showed Vi agglutinins (1:40 or higher dilutions). These results support an earlier conclusion that the development of Vi antibodies in typhoid is not correlated with the severity of the symptoms. The correlation of Vi antibodies with the carrier state is more definite, though the ratio obtained by the authors is lower than that given by some other workers.—L. ALMON and W. D. STOVALL. *J. Lab. Clin. Med.*, 25 (1940), 844; through *Bull. Hyg.*, 15 (1940), 632. (T. C. G.)

Antiseptic. A mixture of sulfur (1), an alkali hydroxide (*e. g.*, sodium hydroxide) (1) and a sugar (sucrose, glucose) (2) is fused together at 700° until a gummy product is formed, which is dissolved in water (6.25 parts). If desired, the solution is mixed with castor oil to form a salve.—M. S. KHODAKOFF, assignor to HYDROXSUL, INC. U. S. pat. 2,082,063; through *J. Soc. Chem. Ind.*, 58 (1939), 1304. (E. G. V.)

Antiseptic Anesthetic Agent—Use of, Locally in Extensive Burn. A second and third degree gasoline burn of the leg and both hands was successfully treated with ordinary agents. A vegetable oil anesthetic, bacteriostatic emulsion was prepared and applied locally with clinical benefit. It did not injure the growth of epithelium or skin grafts. The water-in-oil emulsion contained: 1.3% benzocaine, 2.8% phenol, 1.4% ethyl alcohol, 0.20% oxyquinoline base, 0.39% calcium soap, 0.25% calcium iodide, 0.02% CaS_3O_3 and 0.14% KI.—PATRICK NAGLE. *J. Okla. State Med. Assoc.*, 33 (1940), 14; through *Chem. Abstr.*, 34 (1940), 4526. (F. J. S.)

Antiseptics. Details are given of the production of some 3,7-diamino-9,10-dialkylphenanthridinium halides.—WALTER G. CHRISTIANSEN and WM. BRAKER, assignors to E. R. SQUIBB & SONS. U. S. pat. 2,176,889, Oct. 24, 1939. (A. P.-C.)

Antitetanus Serum Production. The method of preparation is described.—ANON. *Chemist and Druggist*, 134 (1941), 68. (A. C. DeD.)

Bacteria of the Salmonella Group—Method for the Isolation of Toxic and Immunizing Fractions from. Aqueous solutions of urea extract from bacteria of the *Salmonella* group gave substances which contain a considerable proportion of carbohydrate and at the most only traces of protein. These substances are highly toxic and confer active immunity on mice.—JAMES WALKER. *Biochem. J.*, 34 (1940), 325. (F. J. S.)

Bactericidal Activity—Compounds Having High. Phosphoric acid derivatives of 4-aminobenzene sulfonamides are neutralized by organic bases containing at least 4 carbon and 1 nitrogen atoms.—PRODUITS ROCHE, SOC. ANON. Belg. pat. 435,094, July 31, 1939. (A. P.-C.)

Bactericides—Stabilized. A composition of good stability comprises a slightly alkaline solution of a mercury derivative of a substituted phenol such as (acetoxymercuri)nitro-*p-tert*-butylphenol together with gelatin, egg albumin, pectin, casein, lysalbinic acid or protalbinic acid.—WALTER G. CHRISTIANSEN, assignor to E. R. SQUIBB & SONS. U. S. pat. 2,176,890, Oct. 24, 1939. (A. P.-C.)

Bacteriostatic and Bactericidal Substances Produced by a Soil Actinomyces. The bacteriostatic and bactericidal substance produced by a soil actinomyces was shown to consist of two compounds, designated as actinomycins A and B. The first is highly pigmented red, is soluble in ether, ethyl alcohol and water but not in petrol ether; the second is soluble in ether and petrol ether but not in water. A inhibits many Gram-positive bacteria at dilutions 1:100,000,000; and Gram-negative bacteria require concentrations from 1:5000 to 1:100,000. It is only weakly bactericidal. B is weakly bacteriostatic but more active as a bactericidal.—SELMAN A. WAKSMAN and H. BOYD WOODRUFF. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 609. (A. E. M.)

Bartonella Bacilliformis—Urine Culture of. A child with clinical signs of bartonellosis of Carrion showed no bacilli in blood cultures. He was treated with vitamins B_1 and C and liver and spleen preparations. Immune serum from his father who had previously recovered from an attack of verruga was also injected. Ten cc. of urine were cultured in peptone and presented the characteristics of cultures of *Bartonella bacilliformis*. Since *Bartonella* is filterable it passes through the renal epithelium and thus may appear in the urine even when not evident in the blood.—EDMUNDO ESCOMEL. *Reforma Medica*, 25 (1940), 116. (G. S. G.)

Benzene Derivatives of the Sulfanilamide Group—Chemotherapeutic Properties of Products Obtained by Coupling Amino Acids or Proteins with. Sulfanilamide, *p,p'*-diaminodiphenylsulfone and *p*-nitro-*p'*-aminodiphenyl sulfoxide were diazotized and coupled with tyrosine, histidine and normal horse-serum proteins. Their activity toward gonococcus was little affected, but their activity toward streptococcus was considerably reduced. When coupled with pneumococcus antiserum the antibodies of the serum were inactivated.—H. PASSEDOUET and A. VAISMAN. *Compt. rend. soc. biol.*, 130 (1939), 130–132; through *Chimie & Industrie*, 42 (1939), 677. (A. P.-C.)

Butyl Alcohol-Producing Anærobes—Biotin as a Growth Factor for. Biotin as a growth factor for butyl alcohol-producing anærobes is about 500 times as active as the "liver concentrate" of McDaniel, and it is evidently the only substance re-

quired in addition to the ordinary nutrients. Hydrolyzed casein evidently contains small amounts of some substance which is in this case physiologically equivalent to biotin.—E. E. SNELL and R. J. WILLIAMS. *J. Am. Chem. Soc.*, 61 (1939), 3594. (E. B. S.)

Cancer—Process for the Diagnosis of, and Preparation of a Serum. The Wassermann reaction is carried out using the pathogenic agent of cancer in its bacillomorphous stage.—W. VON BREHMER. Belg. pat. 434,525, July 31, 1939. (A. P.-C.)

Diphtheria—Doses of Serum in. Opinions differ as to the amounts of serum to be given. Schick recommends 500 units per Kg. while others range from 30,000 to 80,000 unit total. Relatively high doses seem most effective because of more rapid diffusion through the tissues. The amount depends on localization, age, weight, length of time, severity and complications; 500 to 1000 units per Kg. for nasal diphtheria is the recommended amount, 1500 to 3500 for pharyngeal and 3000 to 5000 for laryngeal types.—TEODORO SEMINARIO VERA. *Reforma Medica*, 25 (1940), 78. (G. S. G.)

Disinfectants—Germicidal Efficiency of Some Medicinal Dyes Compared to a Group of Non-Dye. The dyes as a group are extremely poor germicidal agents. Brilliant green was the only dye that killed *E. typhosa* while several killed *Staphylococcus aureus*, but their toxicity to the tissues showed them to be inferior to the better known non-dye germicides.—A. J. SALLE, I. L. SHECHMEISTER and W. A. MCOMIE. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 614. (A. E. M.)

Disinfectants—Importance of the Density of Bacterial Suspensions in the Examination of Various. The density of bacterial suspensions did not affect the determination of the temperature at which bacteria are killed. In resistance tests, less concentrated suspensions were killed much more easily. For continuous tests a suspension of medium concentration is recommended. This can be prepared by washing an agar slant with 2 cc. of physiological NaCl solution and adding 0.2 cc. of the solution to 5 cc. of the disinfectant to be tested. Agar seemed to be more suitable for such examinations than bouillon.—ISTVÁN VITÉZ. *Ber. ungar pharm. Ges.*, 16 (1940), 151; through *Chem. Abstr.*, 34 (1940), 4226. (F. J. S.)

Disinfecting Agents—Inorganic Substances as against Fungi. Sixty-nine different substances were tested against *Penicillium glaucum, Cladosporium herbarum, Rhizopus nigricans, Dermatium pululans, Oedium lactis, Mucor mucedo, Botrytis cinerea* and *Aspergillus niger*. The results are tabulated in detail. Contact between test solution and organism should be in liquid media, but transfers should be made to solid media in order to make sure that the organisms are dead. Disinfectants can be divided into two groups: (1) those which penetrate the cell slowly and require higher concentrations and longer contacts; these may seem dead in liquid media but slowly grow out on a solid medium; and (2) those which enter the cell liquids easily cause marked changes and kill quickly. Substances which give off an antiseptic gaseous phase have greater germicidal power than those which do not. Mercuric chloride and substances which give off chlorine in large amounts have the greatest antiseptic powers. Mixtures show increased potency only when a new substance of higher activity is produced by interaction. Acids and alkalies are weak disinfectants. Sodium and potassium nitrates and sodium chloride are inactive.—T. CHRZASZCZ and J. KASZNICA. *Zbl. Bakt. Parasitenk. II*, 100 (1939), 307–327; through *Chimie & Industrie*, 42 (1939), 812. (A. P.-C.)

N'-Dodecanoylsulfanilamide and Sulfapyridine—Effect of, on Experimental Tuberculosis in Rabbits. Dodecanoylsulfanilamide was introduced as a potential chemotherapeutic agent against tuberculosis infection. Both drugs in large doses failed to exert any demonstrable inhibitory effect on experimental tuberculosis in rabbits infected with a bovine strain of tubercle bacilli.—CARL MUSCHENHEIM, CLAUDE E. FORKNER and DOROTHY RHOADES DUERSCHNER. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 556. (A. E. M.)

Equine Encephalomyelitis—Vaccination of Man against. A group of 100 men and women were vaccinated with the crude formolized chick embryo vaccines of the type employed in the protection of horses against equine encephalomyelitis. A bivalent vaccine effective against both Eastern and Western strains of the virus was used. General and local reactions to the vaccine were mild or absent except in one instance in which muscular stiffness developed subsequent to vaccination. Response to the vaccine as measured by serum neutralizing antibody content was high and apparently more rapid for the Western strain than for the Eastern strain. With the former, high titers were observed seven days after the first injection while comparable titers for the latter were found after fourteen days. The results yield no contraindications to the use of properly prepared and tested vaccines of this nature in man. On the contrary, the findings together with consideration of the demonstrated prevalence of subclinical and clinical infections with both strain of virus, constitute emphatic indications for the vaccination of people frequently exposed to the virus in the laboratory and in the field.—J. W. BEARD, D, BEARD and H. FINKELSTEIN. *J. Immunol.*, 38 (1940), 117. (T. C. G.)

Germicidal and Antiseptic Compositions. A solution of a phenylmercuric salt such as a solution of phenylmercuric borate in dilute alcohol is used with a tribasic inorganic acid such as boric acid in a greater proportion as a stabilizing agent to inhibit deterioration by age.—MAHLON J. RENTSCHLER and DONALD B. BRADNER, assignors to HAMILTON LABS., INC. U. S. pat. 2,183,493, Dec. 12, 1939. (A. P.-C.)

Germicidal Detergent for General Use. A major proportion of buffer salts such as sodium carbonate, sodium dihydrogen phosphate or sodium silicate is used with a relatively small proportion of a mixture of active sulfonated wetting agents including a sulfonated alcohol wetting agent such as sodium lauryl sulfonate to form a composition adapted when dissolved in water in amounts of 0.5% to 3% to form a germicidal solution containing a small fraction of 1% of the wetting agents with a sufficient amount of the alkaline salts to give a p_H above 11.5. —MILWARD BAYLISS, JOHN L. WILSON and ERLING J. ORDAL, assignors to ECONOMICS LABORATORY, INC. U. S. pat. 2,183,037, Dec. 12, 1939. (A. P.-C.)

Gonococcus Vaccines in Acute Gonorrhea. Vaccine containing between 200 million and 1500 million gonococci was used in 75 cases of urethritis with, or without, complications. It was given every other day up to six doses, after which lavages were given for one month if the urethral secretion persisted. Gonococci disappeared from urethral secretion in from ten days to less than two months. Satisfactory results have lasted from six months to two years after discontinuing treatment. Intravenous administration is most successful but cannot be given to ambulatory patients. Contraindications are heart disease, tuberculosis, asthma, cardiorenal disease and old age.—V. A. GORIA. *Rev. Med. Rosario*, 29 (1939), 1198; through *J. Am. Med. Assoc.*, 114 (1940), 627. (G. S. G.)

Gramicidin—Hemolytic Effect of. Gramicidin, a bactericidal agent isolated by Dubos from cultures of a sporulating soil bacillus, has a powerful hemolytic action against rabbit's and sheep's erythrocytes *in vitro*. This activity is marked even in presence of serum, plasma and tissue extract.—DOROTHY HEILMAN and WALLACE E. HERRELL. *Proc. Soc. Exptl. Biol. Med.*, 46 (1941), 182. (A. E. M.)

Hexamethylenetetramine Salts of Aromatic Acids. Compounds suitable for use as antiseptics for the treatment of infections of the urinary tract are produced, such as methenamine phenylacetate, methenamine β-phenylpropionate, methenamine, γ-phenylbutyrate, methenamine cinnamate, and methenamine β-hydroxy-β-phenylpropionate, which are soluble in water, alcohol, chloroform and benzene, and insoluble in ligroin. Various details of manufacture are given.—MONROE D. EDELMAN and EDMOND T. TISZA, assignors to PYRIDIUM CORP. U. S. pat. 2,179,618, Nov. 14, 1939. (A. P.-C.)

Hydrogenated Oil as an Ointment Base. IV. Antiseptic Ointments. Since some investigators have found that activity of phenol ointment is dependent on the base, it appeared that other antiseptic ointments might be similarly affected. A large number of partially hydrogenated oils were tried as bases. Ointments of phenol, boric acid and ammoniated mercury were prepared. Bacteriological tests using *Staphylococcus aureus* as the test organism indicated that boric acid or phenol ointments prepared with the official base or with hydrogenated oils possessed no bacteriostatic properties. All ointments of ammoniated mercury were basteriostatic but those prepared with hydrogenated oils were superior to those prepared with the official base.—GEORGE W. FIERO and TED A. LOOMIS. *Jour. A. Ph. A.*, 29 (1940), 458. (Z. M. C.)

Immuno-Chemistry—Studies in Synthetic. V. Observations on Antisera against Aspirin-Protein Complexes. Aspiryl protein complexes have been prepared by coupling acetylsalicylazide with horse- and rabbit-serum globulins. Immunization of rabbits against the aspiryl horse-serum globulin gives rise to strongly reacting antisera, the serological properties of which are specifically determined by the aspiryl- (or salicyl-) amido grouping. Such immune sera are able partly to protect rats, suffering from pyrexia as the result of injection of yeast, from the normal antipyretic effect of aspirin.—G. C. BUTLER, C. R. HARINGTON and M. E. YUILL. *Biochem. J.*, 34 (1940), 838. (F. J. S.)

Iodide Oxidase. Mechanism of Iodide Oxidation by Aspergillus. The author summarizes as follows: (1) The culture medium of *Aspergillus niger*, as was shown by previous workers, oxidizes iodide to free iodine. (2) This oxidation is not, however, catalyzed by a specific iodide oxidase or by an oxygenase as was suggested by previous workers but by hydrogen peroxide formed in the medium. (3) This peroxide is formed as a result of a primary oxidation reaction of glucose catalyzed by glucose oxidase. (4) The oxidation of iodide is, therefore, a secondary oxidation reaction which can be promoted by every primary oxidizing system which reduces molecular oxygen to hydrogen peroxide.—A. A. PEARCE. *Biochem. J.*, 34 (1940), 1493. (F. J. S.)

Nicotinic Acid as a Growth Factor for H. Pertussis. Nicotinic acid or nicotinamide favor the growth of Phase I *H. pertussis*.—J. W. HORNIBROOK. *Proc. Soc. Exptl. Biol. Med.*, 45 (1940), 599. (A. E. M.)

Oils, Especially Cod Liver Oil—Bactericidal Properties of Certain. Water shaken with cod liver oil acquires an acid reaction and a marked bactericidal power. The bactericidal substance extracted by water gives aldehyde reactions and is volatile with steam. Bacteria in aqueous suspension are killed by floating a layer of cod liver oil on the suspension, without shaking.—P. NELIS and G. THOMAS. *Compt. rend. soc. biol.*, 130 (1939), 1074–1076; through *Chimie & Industrie*, 42 (1939), 854. (A. P.-C.)

Phenol and Formaldehyde—Comparison of the Disinfecting Power of. The bacteriostatic action of formaldehyde is much more marked than that of phenol; it is much more intense at ordinary temperature (about 18° C.) than at 37° C. Formaldehyde is less subject than phenol to the inhibiting effect of organic substances, though phenol is one of the compounds that are least affected by the presence of such substances. Formaldehyde is less affected than phenol by variations in concentration; its dilution coefficient is in the neighborhood of 1 at ordinary temperatures, whereas that of phenol under the same conditions is 6.5. For this reason formaldehyde acts more slowly than phenol at relatively high concentration, but can exert its disinfecting action at definitely lower concentrations than those which are admissible for phenol. Formaldehyde is less sensitive than phenol to temperature variations. Consequently the slowness of action of formaldehyde as compared with phenol becomes less marked as the temperature falls.—R. GANGANELLA. *Ann. Igiene*, 49 (1939), 573–596; through *Chimie & Industrie*, 43 (1940), 147. (A. P.-C.)

Phenylmercuric Citrate. This compound, a highly germicidal white powder melting (with decomposition) at 200° to 204° C., is prepared by heating phenylmercuric hydroxide with citric acid.—RALPH P. PERKINS, assignor to DOW CHEMICAL CO. U. S. pat. 2,181,098, Nov. 21, 1939. (A. P.-C.)

Phenylmercuric Ointments. The diffusion rate of phenylmercuric salts in various ointment bases was determined by placing the ointment in a central cup in an agar plate prepared by pouring the medium, infected with *Micrococcus aureus*, around a central glass ring, removed after setting of the agar. The zones obtained after 36 hours of incubation at 37° C. were observed. Three zones were obtained: zone 1, no growth; zone 2, sparse growth; zone 3, normal growth. Measurement of the width of zone 1 was considered the best criterion of diffusion. The ointment bases included: lanolin, aqueous lanolin, adeps lotus, Dermotel, Glycoderm, Opacream (unperfumed), Unguentum molle and vaseline. Tests were conducted with (*a*) 1/2% phenylmercuric acetate dissolved in these bases, and with (*b*) 1% phenylmercuric chloride dispersed in them. In series (*a*) the greatest diffusion was obtained with Opacream; Unguentum molle was second; and the least diffusion was from aqueous lanolin. In series (*b*) diffusion was greatest from aqueous lanolin, least from anhydrous lanolin. Various strengths of the two mercury salts were compared in Unguentum molle as the base. Concentration affected the diffusion slightly. Eighteen references are cited.—E. JENSEN. *Arch. Pharm. Chemi*, 47 (1940), 547. (C. S. L.)

Phosphodichloride of 4-Aminobenzenesulfonamide—Preparation of. Bactericidal sulfurous compounds containing one or more amino groups are heated with phosphorus oxychloride.—PRODUITS ROCHE, SOC. ANON. Belg. pat. 435,311, July 31, 1939. (A. P.-C.)

Pneumococcal Infections—Action of Sulfamethylthiazole on Experimental. This communication deals with the therapeutic action of sulfamethylthiazole (2-*p*-aminobenzenesulfonamido-4-methylthiazole) in experimental infection of mice with pneumococci of Types I, II, III and VII. Administered by mouth in the form of a suspension in

mucilage of tragacanth the drug is well tolerated by mice, but its sodium salt, which is more soluble, approximates sulfanilamide in toxicity. In the therapeutic tests mice of average weight (20 Gm.) received mucilage suspensions of the product and as much as 60 mg. could be administered to these animals daily for 4 days without untoward effect. Infecting inocula of 500 and 100,000 minimum fatal doses were used in the case of Types I and VII. With both inocula, and with both types, the therapeutic action of the drug was notable and in the case of Type I compared very favorably with sulfanilamide. In the case of Type II the infecting inocula were 50 and 10,000 minimum fatal doses. With the smaller inoculum the therapeutic effect of the sulfamethylthiazole was undoubted and its superiority to sulfanilamide equally definite. Using 10,000 minimum fatal doses of Type II the therapeutic effect was less notable. Tests were made only with 500 minimum fatal doses of Type III; these showed considerable therapeutic effect and, compared with corresponding dosage of sulfanilamide, suggested that the product under investigation was the superior drug.—G. IVANOVICS. *J. Path. Bact.*, 51 (1940), 91; through *Bull. Hyg.*, 15 (1940), 634. (T. C. G.)

Poliomyelitic Virus in Urban Sewage. Three urban epidemics of poliomyelitis in 1939 afforded the opportunity of investigating the question of sewage pollution with the virus. Monkeys were inoculated intraperitoneally with samples of sewage. Diagnosis of poliomyelitis was based upon clinical signs and symptoms, typical lesions of the spinal cord and successful passage to a second monkey. Virus was isolated from samples associated with 2 of the 3 epidemics and could not be isolated when the epidemics were over. From the results obtained the following conclusions were drawn: (1) Poliomyelitis virus can be occasionally isolated from urban sewage during the course of an epidemic. (2) It cannot be demonstrated in urban sewers at all times. (3) Isolation of the virus in the vicinity of an isolation hospital is easier than in sewers elsewhere. (4) The total virus content may occasionally be very large. The authors are careful to point out that their findings do not indicate that sewage contamination plays any part in the spread of the disease.—J. R. PAUL, J. D. TRASK and S. GARD. *J. Exp. Med.*, 71 (1940), 765; through *Bull. Hyg.*, 15 (1940), 644. (T. C. G.)

Pregnenolone—Bacterial Dehydrogenation of, to Progesterone. The influence of side chains on the hydrogenation of the 3-carbonyl group of cholestanone by fermenting yeast also appears in the biochemical hydrogenation of members of the pregnane series which have an acetyl group on carbon atom 17; allopregnanedione and pregnanedione are not reduced by fermenting yeast. In view of this fact it was of interest to determine the influence of the steroid side chain on the dehydrogenating action of the bacterial mixture grown on Milan yeast which smoothly converted dehydroandrosterone into androstenedione. As substrates for these experiments were chosen cholesterol and pregnenolone. Under identical conditions cholesterol remained wholly unchanged while pregnenolone was dehydrogenated to progesterone, although the oxidation proceeded less smoothly (to the extent of only about 40%) than that of androsterone to androstenedione.—L. MAMOLI. *Ber. deut. chem. Ges.*, 71 (1938), 2701–2703; through *Chimie & Industrie*, 42 (1939), 680. (A. P.-C.)

Proseptasine and Soluseptasine—Use of, in Hemolytic Streptococcal Infections. The low toxicity of proseptasine, due to the introduction of the benzyl group into *p*-aminobenzenesulfonamide, has been demonstrated in the laboratory and in the clinic. It is safe and one of the best tolerated products for acute microbic infections. Soluseptasine, the only colorless sulfonamide available in concentrated aqueous solution for parenteral use, is used as a synergist to proseptasine in the treatment of erysipelas, puerperal sepsis and septicemia.—ANON. *Indian Med. Gaz.*, 75 (1940), 512. (W. T. S.)

Sabin Agglutination Test as a Control of the Sulfapyridine Treatment of Pneumonia. Fifty adult patients with pneumococcic lobar pneumonia treated with sulfapyridine were studied to determine the time at which active immunity first appeared. All patients with proved type-specific pneumococcic pneumonia developed strongly positive agglutinins at some time in the course of their illness. Strong type-specific agglutination occurred in the uncomplicated cases on an average of 8.3 days after the onset of the disease; in complicated cases on an average of 12.5 days. When active immunity did not appear early in the second week of the disease, complications or delay in resolution frequently occurred. Persistence of a strongly positive agglutination for the homologous type pneumococcus was a favorable prognostic sign.—W. W. FOX, R. ROSE and W. L. WINTERS. *Am. J. Med. Sci.*, 200 (1940), 78–84. (B. H.)

Staphylococcal Food Poisoning in Yokosuka City. The outbreak was in October 1939 and involved 110 persons, all of whom had eaten kamaboko (fish sausage) contained in baskets of food given away at an entertainment. Of 160 persons who ate kamaboko 110 were poisoned, including 16 who heated the sausage before eating. Symptoms were of the usual type, with diarrhea and vomiting in about 90% of the cases; incubation period 2 to 4 hours, average 3.2 hours; quick recovery, no deaths. The kamaboko contained numerous colonies of *Staphylococcus aureus* alpha and beta hemolytic strain, estimated as about 100,000 per Gm. and virulent to mice intraperitoneally. Five-day-old cultures at 37° C. were filtered. The hemolysins were neutralized by two methods, one incubation at 37° C. after addition of 0.4% formalin, one by the addition of an alpha antitoxin containing 600 International Units per cc. The filtrates so treated were injected intraperitoneally into a number of kittens. One cc. of the filtrate caused, after 10 minutes, severe diarrhea and vomiting, which occurred frequently and ended in death after about 9 hours. Two non-hemolytic strains from the fish sausage gave negative kitten tests. The kamaboko was made two days before it was delivered to the restaurant distributing the food. The source of the hemolytic staphylococcus was a suppurative lesion on the hand of a worker at the kamaboko factory. Examination of six other samples of fish sausage from different factories showed only non-hemolytic staphylococci.—T. KODAMA, M. HATA and Y. SIBUYA. *Kitasato Arch. Exp. Med.*, 17 (1940), 115; through *Bull. Hyg.*, 15 (1940), 730. (T. C. G.)