

EDITORIAL NOTES

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NEW AND NONOFFICIAL REMEDIES.

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the Rules on which the Council bases its action will be sent on application.

W. A. PUCKNER, *Secretary*.

DIGIFOLINE-CIBA.—A digitalis preparation containing the active glucosides of digitalis, free from extractive matter. It is standardized to have the strength of digitalis leaves as standardized by the frog method of Focke ("Nachweis und Bestimmung von Giften auf biologischem Wege," by H. Fuhner, 1911).

Actions and Uses.—The same as those of digitalis.

Dosage.—Digifoline-Ciba may be administered orally, rectally, or by subcutaneous intramuscular or intravenous injection: three digifoline-Ciba tablets by mouth or 2 cc. of digifoline-Ciba solution hypodermically, daily, during three days, followed by intervals of ten days, if it is necessary to repeat the treatment; in acute conditions, four digifoline-Ciba tablets orally, or 3 cc. of digifoline-Ciba solution hypodermically or 1 to 2 cc. of digifoline-Ciba solution intravenously. The maintenance dose is one digifoline tablet daily for five days in every fourteen. The massive dose method with digifoline-Ciba is as follows: The average dose required having been determined on the basis of 1 minim of digifoline-Ciba solution for each pound of body weight, one fourth of this is given at once and the remainder is divided in from three to six doses and administered at intervals of four to six

hours until the desired effect is obtained or some effect of digitalization becomes manifest.

Manufactured by the Society of Chemical Industry in Basle, Basle, Switzerland (Ciba Company, Inc., New York, distributor). No U. S. patent. U. S. trademark 99,808.

Ampuls Digifoline-Ciba Solution, 1 cc.: Each ampul contains 1.1 cc. of a digifoline-Ciba solution, each cubic centimeter containing digifoline-Ciba equivalent to 0.1 Gm. (1½ grains) of digitalis leaves standardized by the Focke method.

Ampuls Digifoline-Ciba Solution, 5 cc.: Each ampul contains 5 cc. of a digifoline-Ciba solution, each cubic centimeter containing digifoline-Ciba equivalent to 0.1 Gm. (1½ grains) of digitalis leaves standardized by the Focke method.

Digifoline-Ciba Liquid: Each cubic centimeter contains digifoline-Ciba equivalent to 0.1 Gm. (1½ grains) of digitalis leaves standardized by the Focke method. It contains 12 per cent of alcohol.

Tablets Digifoline-Ciba: Each tablet contains digifoline-Ciba equivalent to 0.1 Gm. (1½ grains) of digitalis leaves standardized by the Focke method.

Dried and finely ground digitalis leaves are extracted with distilled water. The neutralized filtrate is then treated with alcohol, precipitated with a solution of lead acetate and filtered. The filtrate, after the removal of the lead and neutralization, is filtered and concentrated to a certain volume in a high vacuum at a temperature not exceeding 30° C. The active principle which separates through the foregoing concentration is collected and dried under a high vacuum at a temperature of 40° C. It is then dissolved in methyl alcohol, the filtrate treated with chloroform and the chloroform, separated from the aqueous solution, distilled off and the residue dissolved methyl alcohol. The aqueous solution which has been separated from the chloroform solution is treated with a mixture of ether two parts and benzene one part; the ether-benzene extract is concentrated under high vacuum at low temperature and the remaining residue dissolved in methyl alcohol. The several methyl alcohol solutions are mixed, decolorized with charcoal and concentrated under a high vacuum to a dry residue, which constitutes digifoline-Ciba.

Digifoline-Ciba is almost colorless and odorless, with a slightly bitter taste. It is an amorphous brownish powder, soluble in water, methyl alcohol and ethyl alcohol; insoluble in ether and petroleum ether.

Prepare two solutions: (A) Dissolve ferric sulphate, 5 Gm., in water, 100 cc., filter and add 5 cc. of the filtrate to 500 cc. of pure glacial acetic acid; (B) add 5 cc. ferric sulphate solution (ferric sulphate, 5 Gm. in water, 100 cc.) to 500 cc. pure sulphuric acid. Dissolve a trace of digifoline-Ciba in 5 cc. of solution A and layer this solution carefully on 5 cc. of solution B: at the point of contact, a dark band appears; the lower layer assumes a red color and the upper layer a bluish green color; on standing, the bluish green layer turns to indigo-blue.

CONCENTRATED POLLEN EXTRACTS-

SWAN-MYERS (See New and Nonofficial Remedies, 1929, p. 26).

The following product has been accepted:

Canada Blue Grass Concentrated Pollen Extract-Swan-Myers.—Prepared by the method given for concentrated pollen extracts-Swan-Meyers (New and Nonofficial Remedies, 1929, p. 26).

SULPHARSPHENAMINE-SEARLE (See THE JOURNAL, April 20, 1929, p. 1349).

The following dosage forms have been accepted:

Sulpharsphenamine-Searle, 0.1 Gm. Ampuls.
Sulpharsphenamine-Searle, 0.2 Gm. Ampuls.
Sulpharsphenamine-Searle, 0.3 Gm. Ampuls.

From *Jour. A. M. A.* for June 15, 1929.

LUMINAL-SODIUM (See New and Non-official Remedies, 1929, p. 81).

The following dosage form has been accepted:

Ampuls Luminal-Sodium (Powder), 2 grains.

From *Jour. A. M. A.* for June 22, 1929.

ALKALOID OF ARTABOTRYS SUAVEOLENS.

The bark of the root and stem of *Artabotrys suaveolens*, Blume., a native of the Philippines, contains an alkaloid, artabotrine $C_{28}H_{48}NO_8$; m. p. $187^{\circ}C$.; freely soluble in chloroform; sparingly soluble in ether and in other organic solvents; practically insoluble in water. It crystallizes from ether in cubical crystals, and from chloroform in radiating tufts. It is slightly bitter; not precipitated by the usual alkaloidal reagents. It dissolves to give a colorless solution in sulphuric acid, which becomes red, then yellow, on adding nitric acid. In sulphuric acid, containing sugar, it gives a pink color changing to reddish violet; with Froehde's reagent a dirty green to blue color results. In strong nitric acid it is dissolved to a red, then greenish yellow, and finally yellow solution. Solutions in strong hydrochloric acid, and in acidified sodium nitrite solution remain colorless. A few milligrams of the hydrobromide were fatally toxic to a guinea-pig by hypodermic injection; the symptoms were dyspnoea, stretching of the limbs, dilation of the pupils and convulsions. These symptoms are very similar to those produced by anonaceine, as indicated by De Rochebrune. The hydrochloride and hydrobromide form definite crystals, which are illustrated.—J. M. Maranon in *Philippine J. Sci.*, 38 (1929), 259; through *Quarterly Jour. Pharmacy and Pharmacology*.

IODINE RESEARCH PROGRAM.

Since January 1, 1928, Mellon Institute of Industrial Research, Pittsburgh, Pa., has had in operation a Multiple Industrial Fellowship founded for the purpose of investigating the properties and uses of iodine. This Fellowship, which is sustained by the Iodine Educational Bureau of New York City, is headed by Dr. George M. Karns, formerly of the University of Illinois.

Recently, through an additional appropriation from the Fellowship donor, Mellon Institute, acting for the Iodine Fellowship, has made arrangements for the study of certain iodine problems in other institutions that have special facilities for such types of work. On October 7, 1929, a scholarship was founded at the Philadelphia College of Pharmacy and Science by a research grant from the Institute. This scholarship—which, for the college year 1929–30, will be held by Mr. L. F. Tice—will have for its aim a broad investigation of vehicles and solvents for iodine, especially for external use in medicine. A large number of new organic chemicals will be studied as solvents with the object of evolving, if possible, a more satisfactory preparation than the alcoholic tincture now in use. The research, for which a definite program has been laid down, will be supervised by Prof. Charles H. LaWall with the advisory collaboration of other faculty members of the Philadelphia College of Pharmacy and Science and with the direct coöperation of Dr. Karns. The investigational findings of the scholarship will be reported in the literature.

The nutritional place and value of iodine in the feeding of live stock is being studied at Pennsylvania State College. The work is being directed by Prof. E. B. Forbes, under special grants for extramural research. The Mellon Institute is also giving consideration to the founding of a research scholarship in a medical school for the purpose of aiding in the solution of incompletely answered questions respecting the utility of iodine in internal medicine. A number of pharmacologists are aiding the Institute in determining a program for such pharmacodynamic inquiry.

UNIVERSITY OF VIRGINIA OPENS LABORATORY TO INVESTIGATE ALKALOIDS.

The University of Virginia announces the opening of a laboratory where a series of investigations in the chemistry of alkaloids and

related substances will be carried on under the auspices of the Division of Medical Sciences of the National Research Council. Lyndon F. Small, research associate at the university, has been appointed director of the new laboratory. The present personnel includes Erich Mosettig, University of Vienna, Alfred Burger, University of Vienna, Frank L. Cohen, Northwestern University, Jakob van de Kamp, University of Utrecht and Louis Eilers, University of Illinois.

NOBEL PRIZES IN MEDICINE.

Dr. Christian Eijkman, of the University of Utrecht, and Sir Frederick Gowland Hopkins, professor of biochemistry at the University of Cambridge, England, have been awarded the 1929 Nobel prize in medicine. In 1889 Professor Eijkman succeeded in producing polyneuritis in fowl by feeding them a diet consisting exclusively of completely polished rice. In 1906, Professor Hopkins demonstrated that an accessory food substance besides proteins, fats and carbohydrates was necessary for growth, reproduction and maintenance of life in animals. Since then both scientists have done considerable research in their respective fields. Professor Hopkins has been called discoverer of the vitamins.

CHEMISTRY AWARDS.

The Swedish Academy has divided the Nobel chemistry prize for 1929 between Dr. Arthur Harden, head of the biochemical department of the Lister Institute and professor of biochemistry in London University, and Prof. Hans Euler, of Stockholm.

The Nobel prize for physics for 1929 was awarded to the Duc de Broglie and the 1928 prize to Professor O. W. Richardson, of King's College.

Dr. Irving Langmuir, assistant director of the research laboratory of the General Electric Company and president of the American Chemical Society, has been chosen by the trustees of Columbia University to receive the medal of the Charles Frederick Chandler¹ Foundation this year. The Charles Frederick Chandler Foundation is a fund presented in 1910 to the trustees of Columbia University by friends of the late Professor Chandler, the income of which is used to provide a lecture by an eminent chemist and a medal to

¹ Dr. Chandler held membership in the A. Ph. A. from 1867 until his death, a few years ago.

be awarded to the lecturer in further recognition of his achievements in science.

DEAN CLAIR A. DYE, GUEST OF HONOR.

Pharmacy Week celebration in Columbus was made the occasion of an expression of good will and appreciation by members of Columbus Retail Druggists Association and of the Ohio Pharmaceutical Association to Dean Clair A. Dye. The College of Pharmacy of Ohio State University will soon have a building devoted entirely to pharmacy.

Lee W. Funk and Thomas J. Ryan divided honors as master of ceremonies and toastmaster. Addresses were made by Dr. Sylvester Goodman, who spoke on the relationship between physicians and pharmacists; Prof. Charles W. Foulke, who spoke on "Pharmaceutical Chemistry," and held that the art of the pharmacist is the oldest, if not the actual progenitor of all the sciences dealing with human health. Grant P. Ward and William C. Wendt, members of the General Assembly, talked on legislative matters, particularly with reference to the appropriation which gave the university its new pharmacy building. Other speakers were: Dean Edward Spease, of the College of Pharmacy of Western Reserve University; Dean Rudolph H. Raabe, of Ohio Northern University College of Pharmacy; Dr. A. C. Neal, of the Ohio State Board of Health and F. O. Taylor.

MEDICAL CONGRESS IN PANAMA.

Public health officials and prominent physicians and surgeons of North, South and Central America will meet in Panama City during the week of January 30th. The congress will hold its sessions in the Gorgas Institute. Health conditions in Panama are excellent and present a striking transformation from former conditions. There will be a display of hospital equipment, drugs and pharmaceutical preparations. Among the physicians and surgeons to be present are Charles H. Mayo, Simon Flexner, Lewllys Barker.

CONFERENCE OF THE INDUSTRIES AT U. S. CHAMBER OF COMMERCE.

On December 5th President Hoover opened a conference of the industries at the headquarters of the U. S. Chamber of Commerce; Secretary Lamont and Assistant Secretary Klein also were present. President Butterworth presided as Chairman. The drug and chemical trade was represented by officials of several of the organizations of the industry.

PERSONAL AND NEWS ITEMS.

Dr. K. K. Chen, widely known for his work on ephedras and ephedrine, much of it reported in the *JOURNAL A. PH. A.*, has joined the scientific staff of Eli Lilly and Company as director of pharmacologic research. He relinquished the chair of associate in pharmacology at Johns Hopkins University medical school to take over his duties with the Lilly organization. Dr. Chen received his B.S. in pharmacy and his Ph.D. in physiology and physiological chemistry from the University of Wisconsin, and his M.D. from Johns Hopkins.

As has been reported in these columns, **Dr. Henry Hurd Rusby** was the recipient, on October 2, 1929, of the Hanbury Medal, presentation having taken place during the opening of the school of the Pharmacy of the Pharmaceutical Society of Great Britain. After the presentation, Dr. Rusby made the Inaugural Sessional Address to the School, his subject being "The Authentication of Materials Used in Scientific Research." At the Convocation in commemoration of the 175th anniversary of the founding of Kings College, on October 30, 1929, the degree of Doctor of Science was conferred on him.

Dean Rusby's friends in the Alumni Association of the New York College of Pharmacy, desiring to honor him and to show their appreciation of his merits in some public way, have sponsored a testimonial dinner, to be held on the evening of December 11, 1929, at the Hotel Pennsylvania, New York City.

Secretary E. L. Newcomb, of the N. W. D. A., has returned from a visit to various wholesale drug clubs in Southern Atlantic, Southwestern, Mississippi and Ohio Valley states. Meetings of the wholesale drug firms, representing different types of organizations, were held and were productive of a spirit of coöperation. Secretary Newcomb stated that the wholesalers feel that their interests, as well as those of retail druggists, will be best safeguarded by continuation of active and harmonious coöperation, each with the other.

Among the files of the Mercer Apothecary Shop in Fredericksburg a prescription was found that Dr. Mercer wrote for his friend Colonel Madison. A number of articles relating to General Mercer and his Apothecary Shop, which has been restored, have appeared during recent years in the *JOURNAL*. At the last annual meeting of St. Andrews Society, in Philadelphia, **Dr. F. E. Stewart**, one of

its former presidents and also a past honorary president of the A. PH. A., carried the sword of General Mercer, a valued possession of this time-honored society.

The Board of Trustees of the New Jersey Pharmaceutical Association has announced that **Prescott R. Loveland** of Atlantic City, New Jersey, has been appointed by President Dudley Singer to succeed **Robert P. Fischelis** as secretary of the New Jersey Pharmaceutical Association. The latter will continue as Editor of the *New Jersey Journal of Pharmacy*, the official organ of the Association. Relief from the secretarial duties and the management of the business affairs of the *Journal* has been sought by Dr. Fischelis for some time because of his ever increasing duties as secretary, and chief chemist of the Board of Pharmacy of the State of New Jersey and other activities. Mr. Loveland has been a member of the Association since 1906 and has been a frequent contributor to pharmaceutical journals. He has had wide experience in the retail drug business and understands the problems of the practising pharmacist from actual contact with them. The secretary's office will henceforth be located at 2627 Pacific Ave., Atlantic City.

J. B. Pilchard is now the secretary-treasurer of Pennsylvania Pharmaceutical Association, succeeding **J. G. Noh**, who resigned several months ago. Mr. Pilchard is a graduate of the Philadelphia College of Pharmacy and Science and has had extended pharmaceutical experience during the past three years, on the Pacific Coast.

Editors and representatives of various drug publications recently were guests of Hoffmann-La Roche, Inc., at their new plant in Nutley, N. J. The visitors were received by its officers and then conducted through the offices and library. After luncheon inspection was made of the manufacturing divisions.

ANNUAL MEETING OF THE NATIONAL DRUG TRADE CONFERENCE.

The annual meeting of the Drug Trade Conference was held in Washington, December 12th. All of the organizations having affiliated in the Conference were represented and much important business was transacted. Plans were made for defining poisons—by definitions applying to the drug, and not in general terms. A valuable educational report was submitted by the Committee on the General Status of Pharmacy, which was profitably discussed.

The fact that all divisions of the drug-trade activities participated enhanced the value of the report and a number of the suggestions will find application in properly balancing the added years of pharmacy courses. The Conference is on record in favor of the Pharmacy Corps in the Medical Department of the U. S. Army. A report of the Conference meeting must be left for printing in a succeeding issue of the JOURNAL.

CERTAIN PORTIONS OF THE NEBRASKA PHARMACY LAW INVALID.

The points raised in the appeal from the District Court were considered by the Supreme Court in the decision as set forth in the syllabus of the case, as follows:

1. The police power is an attribute of state sovereignty, and, within the limitations of State and Federal constitutions, the state may, in its exercise, enact laws for the promotion of public safety, health, morals, and generally for the public welfare.

2. The legislature may not, under the guise of police regulations, arbitrarily invade personal rights or private property.

3. A law which restricts to registered pharmacists the sale of such articles as salt, soda, soap, distilled water, corn starch and other useful but harmless articles, does not tend to promote the public health or welfare, but tends to place in the hands of a limited class a monopoly of the sale of such articles. Such an act is beyond the scope of the police power and is invalid.

4. In so far as Chapter 167, Laws 1927, limits to licensed pharmacists the sale of all articles listed in the United States Pharmacopoeia or National Formulary, it transcends the police power and is invalid.

SALE OF POISONS IN NEW JERSEY.

New Jersey pharmacists have been warned that poisons must be labeled with a red label bearing the name of the article in English and the word "poison" as well as the name and place of business of the dispenser. The name of the manufacturer is not sufficient.

CHLOROFORM TOXICITY.

Experiments on the removal of poison from chloroform by H. Fühner are reported in *Deut. med. Wochenschr.*, 55, 1331 (1929), No. 32.

Death due to chloroform-anesthesia is

probably caused by the oxidation products of chloroform forming in the organism rather than the chloroform itself. Its decomposition to phosgene and hydrochloric acid takes place more quickly, the purer the compound. Pharmacological experiments showed that addition of 10% alcohol lowers the boiling point of chloroform and renders it more stable and less injurious to the organism. Administration of 20% alcohol, or an alcoholic beverage of that concentration to man before the induction of anesthesia in an amount sufficient to produce drowsiness and euphoria increases the stability of chloroform and renders its administration in lesser quantities possible. It has been found that anticatalytic agents such as cysteine, possibly insulin or mannit ($C_6H_8(OH)_6$) and dihydroxyacetone, or a special diet, *e. g.*, oatmeal, retard the oxidation process of chloroform and increase the resistance of the patient to its after-effects.—T. H. *Squibb Abstract Bulletin*, August 28, 1929.

VITAMINE B COMPONENTS.

WATER-SOLUBLE VITAMINES AND THEIR RELATION TO EACH OTHER.¹

Goldberger and his followers conceived the thermolabile water-soluble beriberi-preventing substance (B), and the thermostabile water-soluble, pellagra-preventing substance (P. P. factor) as constituents of vitamine B. Presence of the two substances with a sufficient amount of liquid-soluble vitamins in a diet keeps young rats in good health. While deficiency of one precipitates the disease which it prevents, complete absence of water-soluble vitamins results in the death of the animals. The histological findings showed symptoms resembling those of scurvy. Consequently the B, and P. P. factor separately and together prevent scurvy-like symptoms and are constituents of vitamine C and not of vitamine B in the opinion of the author. It has been observed that addition of yeast (fresh or autoclaved) and of phosphorescin, a dried vegetable extract, to the diet promoted the growth and health of young rats. Alkaline hematin and deuterohemin, produce beriberi in large doses and more in small doses, therefore possess the pellagra-preventing factor of Goldberger. Practical experiments and curves illustrating the above statements are given.—T. H.

¹W. Kollath,—*Arch. expil. Path. Pharmacol.*, 142 (1929), 86; through *Squibb Abstract Bulletin*.