

EDITORIAL NOTES

Editor: E. G. EBERLE, 10 West Chase Street, Baltimore, Md.

Members of the Council, A. PH. A.: S. L. HILTON, *Chairman*; CHARLES H. LAWALL, *Vice-Chairman*; E. F. KELLY, *Secretary*; H. V. ARNY, A. G. DUMÉZ, H. A. B. DUNNING, H. C. CHRISTENSEN, C. E. CASPARI, J. H. BEAL, W. BRUCE PHILIP, T. J. BRADLEY. *Ex-Officio Members*: D. F. JONES, *President*; A. L. I. WINNE, W. B. GOODYEAR, *Vice-Presidents*; C. W. HOLTON, *Treasurer*; E. G. EBERLE, *Editor of the Journal*; A. G. DUMÉZ, *Editor of the Year Book*; R. L. SWAIN, *Chairman of the House of Delegates*.

Collaborators: The Members of the Council; E. FULLERTON COOK, *Chairman*, U. S. P. Revision Committee; E. N. GATHERCOAL, *Chairman*, N. F. Revision Committee; Chairmen of the Sections, A. PH. A.; H. A. LANGENHAN, GLENN L. JENKINS, H. C. NEWTON, DENNY BRANN, GEORGE D. BEAL; A. G. DUMÉZ, *President*, A. A. C. P.; CHARLES B. JORDAN, *Chairman*, Executive Committee, A. A. C. P.; JOHN A. J. FUNK, *President*, N. A. B. P.; HENRY C. CHRISTENSEN, *Secretary*, N. A. B. P.

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*.

VIOSTEROL.

Investigators working with various sterols discovered that ergosterol (originally derived from ergot but now obtained from other substances, mainly yeast), in crystalline form or in solution, when subjected to ultraviolet radiation develops an antirachitic (vitamin D) potency enormously greater than that of cod liver oil. For therapeutic use the ergosterol after irradiation is usually dissolved in a vegetable oil. The Council has adopted the term viosterol to designate irradiated ergosterol and viosterol in oil to designate a preparation containing this substance dissolved in oil. The Council has also provisionally adopted the qualifying phrases 100 D, 5 D, etc., to designate the vitamin D potency of the various preparations as multiples of the vitamin D potency of good cod liver oil. The potency of viosterol preparations is measured by the methods used for determining the vitamin D potency of cod liver oil.

Viosterol is for use in prophylaxis and treatment of rickets and, experimentally, in other conditions arising from faulty calcium and phosphorus assimilation. It should be borne in mind that viosterol does not contain vitamin A and that harm from hypercalcemia may result from the use of too large doses of the substance.

VIOSTEROL IN OIL 100 D.—Irradiated Ergosterol in Oil.—Activated Ergosterol in Oil.—Viosterol dissolved in a vegetable oil and standardized to contain 1333 rat units of vitamin D in each Gm., this strength being 100 times that of a potent cod liver oil used as a standard.

Actions and Uses.—See preceding article, Viosterol.

Dosage.—Daily prophylactic dose for the average infant and child, 8 to 10 drops (0.1233 to 0.1666 cc.: 2 $\frac{1}{2}$ to 3 $\frac{1}{2}$ minims); for the premature and rapidly growing infant, 15 drops (0.25 cc.: 5 minims); daily curative dose, 15 to 20 drops (0.25 to 0.333 cc.: 5 to 7 minims); in severe cases and for adults, doses in excess of 20 drops may be given. The marketed preparations are accompanied by a standard dropper designed to deliver 3 drops to the minim.

Viosterol in oil 100 D is standardized by comparison with a potent cod liver oil containing in each 0.75 mg. 1 rat unit of vitamin D, the rat unit being defined as that amount of vitamin D which, when uniformly distributed into the standard vitamin D deficient diet—ration 2965, *Jour. Biol. Chem.*, 84, 283 (1925)—will produce a narrow and continuous line of calcium deposits in the metaphyses of the distal ends of the radii and ulnae of standard rachitic rats.

Viosterol-Abbott.—A brand of viosterol in oil 100 D, N. N. R.

Manufactured by The Abbott Laboratories, North Chicago, under U. S. patent 1,680,818 (Aug. 14, 1928; expires 1945) by license of the Wisconsin Alumni Research Foundation.

Viosterol-Abbott is prepared by dissolving ergosterol in anhydrous, peroxide free ether-U. S. P.; the solution is filtered, placed in transparent quartz containers with reflex condensers, and exposed to ultraviolet rays at a determined distance and intensity for a determined length of time. The irradiated ergosterol, freed of ether and dissolved in maize oil, is biologically assayed and adjusted to have the potency of viosterol in oil 100 D, N. N. R.

Parke, Davis & Co.'s Viosterol.—A brand of viosterol in oil 100 D, N. N. R.

Manufactured by Parke, Davis & Co., Detroit, under U. S. patent 1,680,818 (Aug. 14, 1928; expires 1945) by license of the Wisconsin Alumni Research Foundation.

Parke, Davis & Co.'s Viosterol is prepared by dissolving ergosterol in warm alcohol; the solution is then irradiated by exposure to ultraviolet rays at a determined distance and intensity; after irradiation the solution is chilled and the crystalline ergosterol removed by filtration; the filtrate is dried under vacuum; it is then dissolved in maize oil and adjusted to have the potency of viosterol in oil 100 D, N. N. R.

Viosterol-Squibb.—A brand of viosterol in oil 100 D, N. N. R.

Manufactured by E. R. Squibb & Sons, New York, under U. S. patent 1,680,818 (Aug. 14, 1928; expires 1945) by license of the Wisconsin Alumni Research Foundation.

Viosterol-Squibb is prepared by dissolving ergosterol in ether; the solution is then irradiated by exposure to ultraviolet rays; after assay of the irradiated ergosterol for its antirachitic potency, it is dissolved in maize oil and adjusted to have the potency of viosterol in oil 100 D, N. N. R.

COD LIVER OIL WITH VIOSTEROL 5 D.—Viosterol dissolved in cod liver oil, the solution containing not less than 400 vitamin A units per Gm. when tested by the pharmacopeial method and 66.65 rat units of vitamin D per Gm., this antirachitic strength being 5 times that of a potent cod liver oil used as a standard.

Actions and Uses.—See preceding article, Viosterol. Cod liver oil with viosterol 5 D is proposed for use in conditions in which it is desired to supplement the administration of vitamin A with that of vitamin D.

Dosage.—For infants and young children, 2.5 to 3.3 cc. (53 to 67 minims) daily; for adults and in severe cases doses up to 7 cc. (140 minims) or more are given.

Cod liver oil with viosterol 5 D is prepared by addition of irradiated ergosterol to cod liver oil in such proportion that the finished product will contain not less than 400 vitamin A units per Gm. when tested by the pharmacopeial method, and 66.65 rat units of vitamin D per Gm., the rat unit being that amount of vitamin D which, when uniformly distributed into the standard vitamin D deficient diet—ration 2965, *Jour. Biol. Chem.*, 64, 623 (1925)—will produce a narrow and continuous line of calcium deposits in the metaphyses of the distal ends of the radii and ulnae of standard rachitic rats.

Abbott's Viosterol Cod Liver Oil.—A brand of cod liver oil with viosterol 5 D, N. N. R.

Manufactured by the Abbott Laboratories, North Chicago, under U. S. patent 1,680,818 (Aug. 14, 1928; expires 1945) by license of the Wisconsin Alumni Research Foundation.

Irradiated ergosterol, prepared by the method described under viosterol-Abbott, is added to cod liver oil and the finished product is required to have a vitamin A potency of not less than 500 pharmacopeial units and to have the vitamin D potency of cod liver oil with viosterol 5 D, N. N. R.

Squibb's Viosterol Cod Liver Oil 5 D.—A brand of cod liver oil with viosterol 5 D, N. N. R.

Manufactured by E. R. Squibb & Sons, New York, under U. S. patent 1,680,818 (Aug. 14, 1928; expires 1945) by license of the Wisconsin Alumni Research Foundation.

Irradiated ergosterol, prepared by the method described under viosterol-Squibb, is added to cod liver oil and the finished product is required to have a vitamin A potency of not less than 500 pharmacopeial units and to have the vitamin D potency of cod liver oil with viosterol 5 D, N. N. R.

Squibb's Viosterol Cod Liver Oil 5 D, Mint-Flavored.—A brand of cod liver oil with viosterol 5 D, N. N. R. containing 0.67 per cent of oil of spearmint as flavoring.

Manufactured by E. R. Squibb & Sons, New York, under U. S. patent 1,680,818 (Aug. 14, 1928; expires 1945) by license of the Wisconsin Alumni Research Foundation.

Irradiated ergosterol, prepared by the method described under viosterol-Squibb is added to cod liver oil containing 0.67 per cent of oil of spearmint as flavoring and the finished product is required to have a vitamin A potency of not less than 500 pharmacopeial units and to have the vitamin D potency of cod liver oil with viosterol 5 D, N. N. R.—*Jour. A. M. A.*, August 31, 1929.

SOME ASPECTS OF OPIUM ADDICTION.

In concluding an editorial on the above subject the *Journal of the A. M. A.* (February 1, 1930) comments: There is one encouraging outcome clearly manifested by the extensive studies of addicts. The addiction to morphine is not characterized by physical deterioration or impairment of physical fitness aside from the addiction *per se*. This may seem highly surprising. Yet detailed clinical examinations of many patients gave no evidence of change in the circulatory, hepatic, renal or endocrine functions.

Light remarks that when it is considered that the persons had been addicted for at least five years, some of them as long as twenty years, these negative observations are highly significant. Thus there are substantial grounds for the belief that, were it possible to relieve the addict of his addiction, complete rehabilitation might be expected. This makes the accomplishment of cure manifoldly desirable when the prospect of success leads to a healthy man rather than to a physiologic derelict.

According to Light, the abrupt withdrawal of morphine was accompanied by only slight changes in the physiologic mechanisms studied, changes that did not afford adequate explanation of the well-known and challenging withdrawal symptoms. The Philadelphia research, which warrants careful reading, indicates the necessity for a study of the addict from some new point of view in order to discover the factors which induce and maintain the state of addiction and which on abrupt withdrawal of the drug elicit the withdrawal symptoms.

BACTERIOLOGY SHOW.

The third annual bacteriological show was held at the University of Illinois, School of Pharmacy on January 22 and 23, 1930. The show consisted of work done during the semester, by senior students in Bacteriology. Other material shown consisted of all the available biological preparations and over one hundred marketed antiseptics and germicides, laboratory equipment, posters and charts.

Since the work in bacteriology laboratory includes the making of media, the twelve kinds as prepared by the students were shown, as well as the twenty-one kinds which are issued to the student for differentiation tests on the organisms studied.

Typical student culture preparations, of which about fifty are made, studied and reported on, besides reports and cultures of yeasts and molds, occupied a special table. Besides these cultures as prepared by students there was a well-lighted case with bacterial growths in giant tubes, each with a neatly labelled card explaining pathogenicity, habitat and some other characteristics.

A central display was the charted reports of the students on phenol coefficients of over seventy marketed antiseptics and germicides, each determination in duplicate.

Bacterial counts of some dozen different milk samples, air analysis of the school lecture halls, the nearby morgues and about thirty other interesting places in Chicago were displayed, each with a scientific interpretation by the student analyst. The presence of bacteria on common things was proved by exhibited cultures of over forty substances, some of which were: paper money, hair combings, handkerchiefs, finger nails, candy bars, door knobs, telephone receivers and mouthpieces, tooth brushes, fruit surfaces, street car straps, teeth tartar, the skin and others.

Among the equipment shown were autoclaves, hot air sterilizing ovens, Arnold sterilizers, equipment for the determination of hydrogen-ion concentration of media, bacteriological stains, dry ingredients of media and pencil tips. Several microscopes were set up and equipped with stained slides such as diphtheria, tuberculosis and typhoid germs. These were well lighted and fixed in focus so visitors to the show could view the bacteria as magnified 1200 x.

All exhibited material was neatly placarded in simple explanatory terms. Two well-versed

attendants were at the exhibit to explain such items as the Wasserman test charts, serums, vaccines, antitoxins, a "mystery microscope," and others.

The show was well advertised in nearby student residences, schools and stores, by means of posters made by the students.

The show tables were set in a horse shoe pattern with one large central exhibit; this arrangement allowed easy access to the displays.

Over five hundred people visited the show during the two days it was open to the public. Many scientific people who visited the show expressed surprise and admiration at the scope of the student work. There was no admission charge.

PERSONAL AND NEWS ITEMS.

Lyman F. Kebler, long connected with the food and drugs activities of the Federal government in the agricultural and post office departments, has become medical director for the Tennessee Products Corporation, Nashville. The corporation, associated with the John McEntee Bowman health interests in connection with the Biltmore hotels, is installing in its new quarters in the Cummins station, Nashville, an extensive laboratory for research. Dr. Kebler was Chairman of the Section on Historical Pharmacy, last year.

Secretary Arthur G. Hulett writes of the activities of Arizona Association in behalf of the Pharmacy Corps Bill and State matters. The State Association will meet in Prescott.

Dean Ernest Little, of New Jersey College of Pharmacy, was host, on January 13th, to a committee of pharmacists who met to discuss public education regarding services rendered by pharmacists in their respective neighborhoods. The Board of Trustees of Rutgers University has authorized the erection of a \$60,000 addition to the College of Pharmacy Building.

Dean A. G. DuMez, University of Maryland, School of Pharmacy, advises that the removal of the school to its new building has been completed. Many large and important additions have recently been made to the library.

The former *American Registered Pharmacist* journal is now *The American Pharmacist*. Under a new name the publication has been enlarged and its purpose to promote professional pharmacy will be strengthened accordingly.