American Medical Association
" Council on Pharmacy and
Chemistry

annual

A REPRINT OF THE REPORTS

OF THE

COUNCIL ON PHARMACY AND CHEMISTRY

OF THE

AMERICAN MEDICAL ASSOCIATION

WITH THE

COMMENTS THAT APPEARED IN
THE JOURNAL DURING 1912

Press of
American Medical Association
Five Hundred and Thirty-Five Dearborn Avenue
1913

PREFACE

The reports of the Council on Pharmacy and Chemistry of the American Medical Association have appeared from time to time in more or less complete form in *The Journal of the American Medical Association.* The more technical and scientific parts of the reports, however, in some cases, both from lack of space and because of their technical nature, have been abstracted or entirely omitted from the published reports. Believing that these scientific investigations should be available to scientists in general, especially to chemists, pharmacologists, etc., interested in medicine, this volume, containing the complete reports of the Council for 1912, as well as the comments which appeared at the time of publication, has been prepared.

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Reports of the Council on Pharmacy and Chemistry

OBJECTIONABLE PROPRIETARY NAMES

(From The Journal A. M. A., March 30, 1912)

The following circular letter was sent out by the Council:

To Manufacturers of and Dealers in Medicinal Products:

Gentlemen:—The Council on Pharmacy and Chemistry of the American Medical Association, since its organization, has been obliged to refuse recognition to a number of otherwise unobjectionable preparations, because their names were considered detrimental to the best interests of the public and the medical profession. In the hope that in the future those who introduce new remedies may see their way clear to adopt names which will not be open to objection, the Council has decided to issue this explanatory statement to the manufacturers of medicinal substances.

The trade names of pharmaceutical preparations or mixtures should be so framed as to indicate the most potent ingredients. An article whose name gives a false impression in regard to its identity or origin, or which is otherwise misleading, would not be acceptable for New and Nonofficial Remedies. An article will not be acceptable if its name suggests to the laity the diseases or conditions in which it is said to be indicated.

After Dec. 31, 1912, recognition will be refused also to names so framed as to indicate even to physicians the diseases or conditions for which the article is to be used. The Council will make no objection to articles submitted to it before Dec. 31, 1912, on the ground that the name is suggestive to the physician, provided that the name is already in use at the time of submission and also provided that the name is so framed as not to be liable, in the judgment of the Council, to lead to self-medication on the part of the public.

Medicine, in common with other branches of knowledge, requires that the subjects with which it deals be provided with a rational, descriptive nomenclature. The Council holds it desirable and important not only that the medicaments official in the pharmacopeias should be provided with scientific names, but that those of a proprietary character should

also have names which are descriptive of their composition. Further, the Council believes that the interests of both the manufacturer and the consumer, the physician and his patient, can be sufficiently safeguarded if to the descriptive name of an article there be appended a distinctive word, syllable, initial or sign that shall identify its manufacturer. In substantiation of this it may be stated that such designations have permitted manufacturers to build up almost world-wide reputations for their products. Reference need only be made to chloral hydrate, Schering; chloroform, Squibb; phenacetin, Bayer; quinin sulphate, P.W.R.; sodium salicylate, Merck, etc. In view of these considerations, the Council offers its endorsement and cooperation to any effective movement toward the establishment of a rational, and if possible, international system for the naming of medicaments.

The Council recognizes, however, that trade conditions make difficult or infeasible, at this time, the adoption of such a rational system of nomenclature. But, on the other hand, experience has shown it possible to give names to new remedies which at least shall indicate their principal constituents. Thus among the articles described in "New and Nonofficial Remedies" appear such names as arsenoferratin, an organic compound of iron and arsenic; bornyval, a valeric acid ester of borneol; brovalol, a bornyl bromvalerate; carbosant, a carbonate of santalol; guaiacodein, a compound of codein and guaiacol; tannismuth, a tannate of bismuth. Therefore the Council recommends that all remedies be given names which shall at least be suggestive of their most characteristic or potent constituents. The Council gives the fullest recognition to the principle that a discoverer has the right to name his discovery and interposes no restriction in the naming of new substances, provided that such names shall not be detrimental to the progress of medicine and thereby work against the welfare and health of the people.

Names which are suggestive of the diseases or conditions in which the remedy is said to be indicated are objectionable because the layman becomes familiar with the names of such remedies and their uses through physicians' prescriptions and is thus led to use them in indiscriminate and harmful self-medication. Names which might not be directly understood by the layman would, in many cases, be understood by the druggist, who would be inclined to recommend the preparations as specifics to the public, without a due knowledge of the range of their values and of the symptoms in question.

But even if the name of a remedy does not disclose its proposed use to the laity, it is still objectionable if it suggests to the medical man the diseases or conditions in which the remedy is to be used. This for the reason that the thoughtless physician will base his use of the remedy on the name without giving due consideration to the condition and symptoms of the patient.

Recognizing that some therapeutically suggestive names have been applied without any intention of appealing to the laity thereby, and further recognizing the difficulty of changing a name once established, the Council has decided to make no objection to names that are now in use if they are therapeutically suggestive to physicians only. Such articles, if on the market and submitted prior to Dec. 31, 1912, will be considered acceptable in so far as their names are concerned.

The following rules apply to the names of articles proposed for inclusion with New and Nonofficial Remedies:

1. The names of pharmaceutical preparations or mixtures must indicate the most potent ingredients.
2. Names which are in any way misleading will not be accepted.
3. Names which suggest diseases, pathologic conditions, or therapeutic conditions will not be admitted, except as provided under 4.
4. An exception is made for established names of synthetic substances, active principles, and other new substances. For these, if submitted prior to Dec. 31, 1912, therapeutically suggestive names may be admitted, provided that the name has been in actual use prior to Dec. 31, 1912, and provided further, that the name is not likely to foster self-medication by the laity.

W. A. PUCKNER, Secretary.

ADVERTISING TO THE PUBLIC OF ANTISEPTICS, GERMICIDES AND DISINFECTANTS

Report of the Council on Pharmacy and Chemistry

(From The Journal A. M. A., April 13, 1912)

With the view of encouraging the use of reliable and efficient antiseptics, germicides and disinfectants by the public, so far as is compatible with safety, the Council appointed a committee to formulate conditions under which the advertising to the public of such preparations accepted for inclusion with New and Nonofficial Remedies should be permitted.

The Council adopted a report which authorizes the advertising of antiseptic and germicidal preparations to the public provided that the advertising is limited to recommendations for use as a prophylactic application to superficial cuts and abrasions of the skin and to the mucous surfaces except those of the eye and the gastro-intestinal and genito-urinary tracts

The report follows.

W. A. PUCKNER, Secretary.

Report of the Committee on Advertising of Antiseptics, Germicides and Disinfectants to the Public

Antiseptics, germicides and disinfectants are freely used by the public, and as the result has proved, on the whole, to be beneficial, no restriction of this use has hitherto seemed advisable, contrary to that advocated for remedies taken internally. This principle has been recognized by the Council on Pharmacy and Chemistry in Rule 3:

"No article that is advertised to the public will be admitted, but this rule will not apply to disinfectants advertised for uses other than on the human body or to non-medicinal food preparations, except when advertised in an objectionable manner."

In the advertising of antiseptics, germicides and disinfectants directly to the general public, the first and only consideration should be the public welfare, and two distinct divisions of the question may thus be formulated:

1. Shall the exploitation to the public of antiseptic, germicidal and disinfective preparations (already adopted for inclusion with New and Nonofficial Remedies) be permitted when these preparations are to be used on the human body?

2. Or, shall their exploitation be limited to recommendations for veterinary use or for uses other than those on the human body?

The arguments advanced in favor of the first division are:

A. The general public is constantly using some antiseptic solutions, advertised for cuts, bruises, and other external injuries. Why should not the public be aided in selecting the most effective preparation?

B. Antiseptic mouth-washes, tooth powders, etc., are commonly used without consulting a physician. The employment of efficient substances for these purposes is beneficial, and it would be a distinct benefit were the public given more definite instruction regarding their use, particularly for prophylaxis.

C. Ordinarily the use of antiseptics for the above-mentioned purposes is not likely to handicap the physician in his efforts to conserve the public health.

It must be admitted that the general use of safe, non-proprietary antiseptics and germicides like boric acid and hydrogen peroxid does much good and little harm. The public is fairly well informed concerning both the advantages and limitations of these remedies, because no one is interested in misrepresenting their action or exaggerating their merits. The situation is different with regard to proprietary antiseptics. The constant tendency is to assure the public that the remedy is a sure preventive or cure of all kinds of diseases and to

encourage its use in all conditions. Thus the public is led to feel a sense of safety in the presence of danger and this often keeps the individual from obtaining that treatment which is necessary to prevent serious illness. The advertising of proprietary antiseptics, germicides and disinfectants by means of pamphlets and circulars accompanying the trade package is particularly objectionable and liable to be harmful to the public, if the claims are exaggerated or if the article is recommended as a treatment of specified diseases.

One needs only to recall the advertisements in the lay press, during a recent epidemic of meningitis, of a proprietary antiseptic preparation which, it was claimed, would prevent and cure the disease if applied to the mucous membrane of nose and throat. Likewise the use of another proprietary antiseptic preparation exploited to the public by means of recommendations accompanying the trade package has lured many a victim of venereal diseases into a sense of safety and thus deprived him of proper treatment.

Tragedies of this nature are bound to occur with inefficient remedies dishonestly exploited. It is to be determined whether the sanction of the Council on Pharmacy and Chemistry for conservative advertising to the public of good antiseptics, germicides and disinfectants for the purposes indicated, would decrease or increase the number of such mistakes.

Experience shows that proprietary brands of hydrogen peroxid, an otherwise most valuable germicide, have been falsely advertised to the public, in the lay press, or by means of circulars accompanying the trade packages, in such a manner as to encourage the belief that they are capable of preventing diphtheria, tetanus and other diseases amenable to cure only by proper medical measures.

The following paragraph (quoted from the comments on Rule 3 in New and Nonofficial Remedies) pointing out the objections of lay advertising of proprietary remedies in general applies with equal force to the dangers of advertising antiseptics and germicides to the public:

"The impossibility of controlling the irresponsible claims which are usually made in advertisements to the public, the well-known danger of suggesting by descriptions of symptoms to the minds of the people that they are suffering from the many diseases described, the dangers of an unconscious and innocent formation of a drug habit, and the evils of harmful self-medication, including the dangers of the spread of many infectious and contagious diseases when hidden from the physician, and similar well-known considerations are the reasons for

discouraging, in the interest and for the safety of the public, this reprehensible form of exploitation."

It is our opinion that the harm likely to result from lay advertising of proprietary antiseptics, germicides and disinfectants for use on the human body, except as a means of prophylaxis, far outweighs the possible good.

The advertising of antiseptics, germicides and disinfectants for veterinary use and as a means of prophylaxis is not open to the same criticisms. Especially is truthful advertising of disinfectants for privy vaults, manure heaps, stagnant pools of water, soiled clothing, etc., a valuable means of educating the public in these matters of sanitation.

It appears to the committee that proper advertising to the laity of disinfectants for veterinary and non-medicinal use does not imperil the health of the community, as is the case with preparations used for medicinal purposes. On the other hand, it is to the interest of the public to receive reliable information concerning the value of these preparations for the prevention of disease and concerning the best methods for their employment.

At the present time inferior preparations are found in a large proportion of households, and the Council would thus confer a real boon to the public by endorsing reliable preparations. It is therefore recommended that the Council permit the advertising to the public of antiseptics, germicides and disinfectants accepted for inclusion with New and Nonofficial Remedies, and that the following should be added to Rule 3 of the Council:

The advertising to the public of antiseptics, germicides and disinfectants accepted for inclusion with New and Nonofficial Remedies shall be permitted, provided that it be limited to conservative recommendations for their use as prophylactic applications to superficial cuts and abrasions of the skin and to the mucous surfaces except those of the eye and the gastro-intestinal and genito-urinary tracts. In no case shall it include recommendations for use as curative agents, nor shall the names of any diseases be mentioned in such exploitation.

If the preparation is sufficiently toxic to require caution in its use to prevent poisoning, this fact shall be stated on the label.

PHENACETIN, SULPHONAL AND TRIONAL

Report of the Council on Pharmacy and Chemistry, Holding These Names to be Non-Proprietary

(From The Journal A. M. A., April 27, 1912)

The following report of the Committee on Patents and Trademarks was adopted by the Council and the descriptions in New and Nonofficial Remedies, 1912, have been modified as directed in the report. W. A. PUCKNER, Secretary.

REPORT OF THE COMMITTEE ON PATENTS AND TRADE-MARKS

Recently the Council voted to list lanolin in "New and Non-official Remedies" as a synonym for adeps lanæ hydrosus, its pharmacopeial name. This action was in accord with the generally recognized principle that the name used by a patentee to designate a patented article becomes the common name of such article after the patent has expired. This principle, and also the principle that a generic title—or common name—cannot be legally continued as a trade-mark, have been generally recognized and are thoroughly well established by decisions of the courts.[1]

So far as medicines are concerned, the same principles have been directly established by a decision of the Supreme Court of the state of New York in the lanolin case.[2]

Your committee believes it important that the medical profession know the facts regarding this subject of names of patented articles, namely, that when the patent expires, the name of the article becomes public property, provided the name has been generally used for the article. Besides adeps lanæ hydrosus or lanolin, there are three preparations in the U. S. Pharmacopeia that come in this category, all of which have been widely used under the proprietary names given by the patentees. These are acetphenetidin, sulphonmethane and sulphonethylmethane, sold, respectively, under the names phenacetin, sulphonal and trional. The patents on these products having expired, anyone can make and sell them. They are now official in many foreign pharmacopeias, with direct or indirect recognition of their trade names in practically all.

It is evident that the names "phenacetin," "sulphonal" and "trional" have become generic designations for the several products to which they have been applied.

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1. For example, the frequently quoted Singer Sewing Machine case may be mentioned. This case was decided by the U. S. Supreme Court (per Justice White, May 8, 1896), on appeal from decree of Circuit Court of U. S. for Northern District of Illinois. The following is an extract of the decision (163 W. S. 169): It is the universal American, English and French doctrine "that where, during the life of a monopoly created by a patent, a name, whether it be arbitrary or be that of the inventor, has become, by his consent, either express or tacit, the identifying and generic name of the thing patented, this name passes to the public with the cessation of the ented, this name passes to the public with the cessatfon of the monopoly which the patent created." . . . The decision emphasizes, of course, that the defendant must not carry on unfair or deceptive competition in business. The principles laid down above are further emphasized by the opinions recorded in Green Tweed & Co. v. Mfgs. Belt Hook Co. (158 F. R. 640).

2. Jaffe et. al. v. Evans & Sons, limited, N. Y. State Rep., Vol. 109, Suppl. 75, p. 257, THE JOURNAL A. M. A., Sept. 9, 1911, lvii, p. 906.

Therefore, it is recommended that the present descriptions for these articles in New and Nonofficial Remedies be modified to indicate more clearly that the names "phenacetin," "sulphonal" and "trional" are synonyms for the official titles acetphenetidin, sulphonmethane and sulphonethylmethane, respectively, and that the tests of identity and purity prescribed in the U. S. Pharmacopeia should apply to the products dispensed under these titles.

TAKA-DIASTASE AND LIQUID TAKA-DIASTASE

Report of the Council on Pharmacy and Chemistry

(From The Journal A. M. A., July 6, 1912)

Some time ago it was decided that a reexamination should be made of Taka-Diastase and Liquid Taka-Diastase, both of which had previously been rejected, to ascertain whether or not the preparations were in accord with the claims made for them by the manufacturers. Accordingly, the matter was referred to a committee of the Council, and an examination of specimens of these two preparations bought in the market was made. The referee's report, which appears below, according to the usual procedure, and before final confirmation by the Council, was first submitted to the manufacturers of Taka-Diastase for comment. The report recommends that the rejection of Taka-Diastase and Liquid Taka-Diastase be allowed to stand, and that the report be published. Parke, Davis & Co., in their reply, which is given in full below, claim that the report is unjust concerning Liquid Taka-Diastase, because the period of activity of the preparation has been greatly prolonged by reducing the amount of alcohol from 18 per cent. to 10 per cent. and by adding glycerin. They reiterate their claims for the digestive power of Taka-Diastase, but admit that it will not reduce the stated amount of starch to the colorless end-point in ten minutes (the standard method for the valuation of diastase). They further state that they would change the word "digest" on the label to "liquefy."

The conclusion of the report having been questioned, the entire matter was referred to a member of the Council's staff of clinical consultants. His report, which, also, is given in full below, states that the material before him was sufficient to decide the matter, and no further tests were necessary. He concludes that the claims of the manufacturers regarding the strength and properties of the material are erroneous and exaggerated; that the literature still sent out by Parke, Davis & Co. is misleading; and that if substitution of the word "liquefy" for "digest" were endorsed by the Council confusion

would result which would give an exaggerated and false value to Taka-Diastase. He therefore recommends that the report of the reinvestigation of Taka-Diastase be accepted by the Council and published.

This report of the second referee was referred to Parke, Davis & Co. with the request that they state more definitely the actual amylolytic strength of their preparations. To this they replied that they had no desire to discuss the subject further, or to make any additional statements.

In accordance with the second referee's recommendations, the Council confirmed its provisional action and voted that the rejection of Taka-Diastase and Liquid Taka-Diastase be allowed to stand, and that the report which appears below be authorized for publication.

W. A. Puckner, Secretary.

Referee's Report on Taka-Diastase and Liquid Taka-Diastase

Following is the report of the committee to which was referred the reexamination of Taka-Diastase and Liquid Taka-Diastase:

Some time ago a comparison was made of the various methods proposed for the valuation of preparations claimed to have amylolytic power. This work was reported in The Journal,[1] and the method proposed for the testing of diastase preparations now appears in New and Nonofficial Remedies.[2] In view of the incorrect and exaggerated claims made for Taka-Diastase, the Council in 1908 was obliged to rescind its acceptance and to direct its omission from New and Nonofficial Remedies. The report contained the following reference to Taka-Diastase (Parke, Davis and Company), a product that had been accepted for inclusion with New and Nonofficial Remedies:

> "The widest discrepancy between the values as claimed by the manufacturer and those found by actual tests seems to be shown in the case of Taka-Diastase. The liquid preparation has been tested a number of times in different samples and has always been found weak. Some samples, in fact, were quite inert. This ferment appears to lose strength very rapidly in solution, as the manufacturers now concede. The stability of the solid product is also far from satisfactory, and appears to be less than that of the ferment as marketed some years ago. The two samples examined recently were weak."

1. The Journal A. M. A., July 11, 1908, p. 140.
2. New and Nonofficial Remedies, 1912, p. 68; also The Journal A. M. A., April 15, 1911, Part 2, p. 18.

More than three years have now elapsed since the publication of the Council's findings regarding Taka-Diastase—sufficient time, it is believed, for the manufacturers to modify either their claims or the product itself, and thus again make it eligible for inclusion with New and Nonofficial Remedies. With the idea in mind new specimens of Taka-Diastase and Liquid Taka-Diastase were purchased from a Chicago drug house and the preparations reinvestigated. The following is the report of this reinvestigation.

REPORT OF THE REEXAMINATION

In our report on the diastase preparations three years ago, it was recommended that Taka-Diastase be removed from New and Nonofficial Remedies, because the examinations showed that it did not have the digestive strength claimed for it. This was true both for Taka-Diastase itself and for Liquid Taka-Diastase. So far as the latter was concerned, the starch-converting power was practically *nil* in those preparations which had been in the drug stores for some months.

During the last few weeks new tests have been carried out with several samples of the Taka-Diastase preparations and the results obtained are essentially the same as those obtained in the former examinations. The liquid preparation is still extremely weak in starch-converting power, while we found that Taka-Diastase itself would convert only 16.6 parts of pure anhydrous starch to the colorless end-point in ten minutes, as explained below.

In our method of experimentation we determine the weight of the diastase in question which will convert a given weight of starch in uniform paste to the so-called colorless end-point in ten minutes, that is to the point where it will no longer give any color reaction with a standard iodin solution. The standard starch weight in 50 c.c. always is 1 gm. or 1,000 mg. and to a series of flasks containing this amount of starch, maintained at a constant temperature of 40 C., the diastase dilutions are added. These diastase dilutions are made by dissolving small, accurately weighed amounts of the sample in some small, constant volume of water, usually 5 or 10 c.c. and they are then poured into the starch flasks at the right temperature, and agitated regularly.

Tests are made by taking a few drops from each flask and mixing with the iodin solution. The end-point is reached when a dilution is found which, at ten minutes from the mixing time, gives no color with the iodin reagent. The first set of tests is taken as a general guide, and quite accurate results may be obtained in a second set of dilutions.

We first used a sample of Taka-Diastase bought in the open market. It was found that 140 mg. were required to convert the gram of starch as explained. This is equivalent to a conversion of 7.14 parts of starch by 1 part of the Taka-Diastase.

A new, and possibly fresher, sample was then obtained and the test repeated. With this new sample it was found that 60 mg. were necessary to convert the gram of starch to the colorless end-point in ten minutes, from which it follows that 1 part of the ferment will convert 16.6 parts of starch to the colorless end-point in the same time. With a new sample of Liquid Taka-Diastase obtained simultaneously it was found that 3.5 c.c. were necessary to convert 1 gram of starch to the colorless end-point in ten minutes. As a fluidounce of this liquid is said to contain 20 grains of the solid it will be seen that the results approximately agree with those of the first sample of the solid, and that they are both very low.

In the earlier tests 16 parts of starch converted by 1 part of the ferment was the value found. These results are in close agreement with values reported by Sherman (*Jour. Am. Chem. Soc.*, xxxii, 1073) for a sample of recent purchase. He found a conversion of 51 parts of starch to the colorless end-point in *thirty* minutes for one sample, while for another he found 66 parts, in the same time. It will be noted that our time limit is *ten* minutes. It is worthy of note that for a perfectly fresh and specially prepared sample furnished by Dr. Takamine, a conversion of 278 parts in *thirty* minutes was found by Sherman. Taking the time into consideration it will be seen that the results are about the same for the market samples as those found by us and much lower than claimed, as well as much lower than for other makes of similar products. The difference in the behavior of fresh specially prepared Taka-Diastase and the market sample is very clearly shown. No one questions the fact that fresh laboratory samples of Taka-Diastase may show a moderate converting power on starch. But we have to deal with the *activity of market samples only*, and Sherman's work and our own show the low digesting power of the product as physicians may secure it on the market.

The marked difference in activity between perfectly fresh and ordinary market samples of Taka-Diastase is very clearly shown also in a recent paper published by Wohlgemuth.[3] In the digestion of starch paste to the "dextrin" stage Wohlgemuth found in the commercial sample a strength approximately a hundred times less than that observed in a fresh sample sent him by Dr. Takamine.

Wohlgemuth's results were obtained by a method not essentially different from ours, with this difference, however, that he digested through 24 hours in the cases reported, and carried the reaction to the "dextrin" stage only, in place of to a colorless end-point. Making the proper reductions it is evident that the actual values found by him for the market samples bought in Germany are not greater than those reported by us.

The reference to the work of Sherman is made because, in a following paper in the same journal, he recommends the use

3. Wohlgemuth: Biochem. Ztschr., March 18, 1912.

of salt as an activator in finding the strength of certain diastase preparations. It is well known that dialyzed diastase preparations and starch of highest purity have but slight action on each other; a little salt increases the activity greatly, and also increases the activity of commercial diastase preparations. These facts Sherman utilizes in working out a method for valuation of commercial diastases. The facts were well known to us at the time of our former report, but it was not thought best to depart from the general method which had been in use by all analysts following the general scheme of Roberts. Quite recently, I. Bang has published a paper on the investigation of diastase (*Biochem. Ztschr.*, xxxii. 417) in which he studies the behavior of sodium chlorid and other salts on the rapidity of starch conversion, and finds that a much smaller amount of salt than Sherman recommends brings the maximum increase.

The method employed in our former tests is a good comparative method, and that is all that may be claimed at present for any method. By adding salt to our starch solution the activity of Panase and other ferments is likewise greatly increased. For Panase, a preparation possessing rather high starch-converting power, we have recently found an increase of about 30 per cent. in the converting power, with salt present. Working to loss of blue color, merely, it is possible in this way to get a higher value than that claimed by the manufacturer. There is no practical gain in using the salt for our purpose as the methods are at best arbitrary, and the results only comparative.

Taking all the facts into consideration it is recommended that the rejection of Taka-Diastase and Liquid Taka-Diastase be allowed to stand and that, in view of their extensive exploitation, this report be authorized for publication so that physicians may know the facts.

This report was referred to Parke, Davis & Co., and they made the following reply:

"The report submitted in your letter of the 23d is, we contend, erroneous and unjust: first, to our Liquid Taka-Diastase, because over three years ago we changed our formula, reducing the alcohol from 18 per cent. to 10 per cent., increasing the glycerin and thus prolonging greatly the period of activity.

"As for our regular Taka-Diastase, our claim is and has been for years simply that Taka-Diastase will digest or hydrolyze 150 times its weight of starch in ten minutes, under proper conditions. We do not claim, we do not permit our representatives to claim, that Taka-Diastase will completely transform starch, to the colorless end-point, into sugars. Taka-Diastase is used to supplement a deficiency of ptyalin and converts the starch into soluble material with great rapidity, thus giving the gastric fluid immediate access to the proteids.

"If in the enclosed labels the word 'digest' were replaced with the word 'liquefy,' the claim could not be assailed by the most

carping critic. To save any possible question, we shall therefor make this change in our label, having it read: 'Taka-Diastase will liquefy 150 times its weight of starch in ten minutes, under proper conditions.' Is there the slightest question in your mind that this statement as just quoted is entirely correct and entirely supported by clinical experience?

"It is our conviction that Taka-Diastase has a very remarkable power to hydrolyze starch either in the test-tube or in the stomach, and that this property is of great utility in clinical work. We do not claim that its conversion of the starch into sugars is complete, to the colorless end-point of the Johnson test; and on this point we have been perfectly frank with the Council, as well as with every physician who has taken sufficient interest to inquire."

In view of the above protest, the matter was submitted to a second referee, who reported as follows:

"Your referee on the matter of Taka-Diastase has made a careful investigation of the reports and correspondence submitted, and begs to make the following report:

"The question at issue, viz., whether Taka-Diastase should be included in New and Nonofficial Remedies, I believe, can be determined by the material before me, and further tests of the material are not necessary.

"The letter of the makers of Taka-Diastase admits that the early claims regarding the strength and properties of the material were erroneous and exaggerated. Since the product was once admitted to New and Nonofficial Remedies, it may be claimed that as the Council on Pharmacy and Chemistry must have been in error then, it may be now. Your referee does not consider this supposition worth discussing. The conclusion he draws is that the Council was too hasty in accepting the preparation, and that the incipient shows how much better it would be in all cases to accept no remedy until sufficient time has been given for conclusive tests.

"The literature still sent out by Parke, Davis & Co. regarding Taka-Diastase is misleading and of a kind more appropriate for a nostrum than a standard chemical substance. What would we think if morphin, quinin or even heroin were advertised in the same way? I cite the statement, 'Taka-Diastase digests starchy food with vigor and directness.' It seems to the referee that the proposition to modify the label to indicate the amount of starch which is liquefied rather than the amount which is saccharified, in accordance with the Council's standard, is bound to lead to confusion and to give an exaggerated and false value to Taka-Diastase.

"Your referee recommends that the report of the reinvestigation of Taka-Diastase which has been submitted to me, be made available to the medical profession, and that the rejection of Taka-Diastase and Liquid Taka-Diastase be allowed to stand."

This report of the second referee was submitted to Parke, Davis & Co., with the request that they state more explicitly their claims regarding the activity of Taka-Diastase and Liquid Taka-Diastase, in order that, if they decided to revise their claims for the preparations, such revision of claims might be published along with the reports of the Council. They replied:

"Answering your note of the 15th instant: We have no desire to discuss further the subject of your letter of February 24, or to make any statement beyond that set forth in our letter to you of Dec. 27, 1911."

CALCIUM GLYCEROPHOSPHATE

Its Poor Quality Shown by a Report of the Council on Pharmacy and Chemistry

(From The Journal A. M. A., July 13, 1912)

Believing that the glycerophosphates were of some probable value, the Council decided to describe calcium glycerophosphate in New and Nonofficial Remedies, so that definite standards of quality might be prescribed. The Association's Chemical Laboratory having, at the request of the Council, taken up the examination of the supply of calcium glycerophosphate on the American market and entered into correspondence with the manufacturing houses, now reports that no product of even fair quality is to be had, and that those who make it appear not inclined to make improvements. Investigation having shown that the glycerophosphates are probably not superior to ordinary inorganic phosphates, there is little likelihood that a consequent decreasing demand will be any inducement to provide a good quality of drug in the future. In view of these conditions, the Council decided not to describe the drug in New and Nonofficial Remedies, and authorized the publication of the report which appears below.

W. A. Puckner, Secretary.

Supplemental Report on Calcium Glycerophosphate

The glycerophosphates have come into rather wide use during the last twenty years. This use was based on the belief that because of the chemical relation between glycerophosphates and lecithin, the former were more readily assimilable than inorganic phosphorus compounds. While the evidence for the value of glycerophosphates was not altogether satisfactory, it was considered sufficient to give these products a place among the remedies of possible value and, therefore, the Council decided to describe calcium glycerophosphate in New and Nonofficial Remedies. Since the Council reached

this decision, experiments by Fingerling,[1] McCollum and Halpin, and others have shown that animals can form organic phosphorus compounds (lecithin, neucleoproteids, etc.) out of inorganic phosphates quite as readily as from organic phosphorus compounds. Hence, it is probable that the glycerophosphates are of no more value in phosphorus metabolism than the inorganic phosphorus compounds.

At the request of the Council the examination of the available supply of calcium glycerophosphate was taken up in the Association laboratory. The following report from the laboratory gives the result of this examination and indicates the efforts which the laboratory has made to secure the adoption of a suitable standard whereby the quality of the product may be judged. .

The laboratory undertook the study of calcium glycerophosphate with the view of proposing standards for its quality. Five specimens were purchased and examined. While a pure specimen should have a faintly alkaline reaction, should be practically free from chlorids, sulphates and alcohol-soluble matter, should contain about 17.5 per cent. of calcium and yield about 55.7 per cent. of ash, the specimens examined gave the following results:

The specimen bearing the label of the Mallinckrodt Chemical Works was faintly alkaline in reaction, contained 1.8 per cent. of chlorid (calculated as sodium chlorid), 0.66 per cent. of alcohol-soluble matter, lost 4.5 per cent. of its weight by drying over sulphuric acid, left 51.9 per cent. of ash on ignition and yielded 12.7 per cent. of calcium by the method used for the determination. This specimen contained considerable amounts of a sodium salt, possibly sodium glycerophosphate.

The specimen sold under the Powers-Weightman-Rosengarten Co. label contained about 1 per cent. of sodium chlorid, 1.8 per cent. of calcium sulphate, 0.7 per cent. of alcohol-soluble matter, free acid equivalent to about 3 per cent. of citric acid, lost 3.5 per cent. of its weight when dried over sulphuric acid, left 51 per cent. of ash on ignition and yielded 15.6 per cent. of calcium.

The Schering and Glatz specimen, sold under the name of "Lime Tonol" with extravagant claims as to its purity, contained a trace of chlorid, about 1 per cent. of calcium sulphate, 3.5 per cent. of alcohol-soluble matter, free acid equivalent to about 4 per cent. of citric acid, lost 3.2 per cent. of its weight

1. Fingerling, G.: Die Bildung von organischen Phosphorverbindungen aus Phosphaten, Biochem. Ztschr., 1912, xxxviii, 448, xxxix, 239. McCollum, E. V., and Halpin, J. G.: Synthesis of Lecithins in the Hen, Proc. Am. Soc. Biol. Chem., 1911; Jour. Biol. Chem., 1912, xi, xiii. See also editorials in THE JOURNAL A. M. A., April 20, 1912, p. 1198; May 25, 1912, p. 1605.

when dried over sulphuric acid, gave 50.7 per cent. of ash on ignition and yielded 15.7 per cent. of calcium.

The Squibb specimen contained a trace of chlorid, 0.6 per cent. of calcium sulphate, 6.3 per cent. of alcohol-soluble matter, free acid equivalent to about 9 per cent. of citric acid, 14.5 per cent. of calcium, lost 2.9 per cent. of its weight when dried over sulphuric acid, and left 47.7 per cent. of ash on ignition.

The Merck specimen contained a trace of chlorid, about 0.25 per cent. of calcium sulphate, 7.5 per cent. of alcohol-soluble matter, free acid equivalent to 9.5 per cent. of citric acid, 14.2 per cent. of calcium, lost 3 per cent. of its weight when dried over sulphuric acid, and yielded 47.8 per cent. of ash on ignition.

The examination showed that none of the specimens examined was completely soluble in water. Those which were most nearly soluble were such as contained considerable quantities of an organic acid. Two of the specimens contained considerable amounts of chlorid and four of them contained considerable quantities of sulphate. One specimen contained both chlorid and sulphate. The alcohol-soluble material ranged from 0.66 per cent. to nearly 7.5 per cent., the greater part of it, apparently, being citric acid. In other words, all of the specimens were decidedly impure in one or more particulars. On comparing the results found in the examination with the standards prescribed in the foreign pharmacopeias and pharmaceutical commentaries—there is no American standard—it was found that none of the specimens complied with all of the requirements in any one of these authorities.

That some of the manufacturers were aware of the poor quality of their products is shown by the occurrence on the labels of their specimens of such qualifying phrases as "Calcium glycerophosphate soluble" and "Glycerophosphate of lime, about 95 per cent."

The findings were submitted, with suggestions for standards and with a request for criticisms to the respective manufacturers, who were also asked to propose standards. Although the firms in a way acknowledged the general unsatisfactory condition of their products, they made no definite promises of improvement.

Thus, according to this examination the market supply, including the proprietary brand "Lime Tonol" for which extravagant claims of purity have been made, are all of inferior quality. The products contain considerable quantities of impurities such as sulphates, chlorids, and foreign sodium and calcium compounds, the presence of the latter in most cases having

been disguised by the addition of citric acid. The composition is such that none of the products on the American market is entitled to the name "calcium glycerophosphate." The report also shows that while the manufacturers have in general acknowledged the poor quality of their product, they have shown considerable indifference concerning its improvement. Since they have been unable or unwilling in the past to supply calcium glycerophosphate of fair quality, there is little likelihood that a decreased demand, which may be expected since the demonstration of its small value, will offer an inducement to improve the quality in the future. In view of these conditions, it is recommended that calcium glycerophosphate be not described in New and Nonofficial Remedies.

DIORADIN REFUSED RECOGNITION

Report of the Council on Pharmacy and Chemistry

(From The Journal A. M. A., Oct. 26, 1912)

A preparation called Dioradin was placed on the market as a cure for consumption three years ago in Europe and somewhat later in this country. It was first submitted to the Council in July, 1911. Because of the manifestly unwarranted claims made for its use in the treatment of tuberculosis, the Council voted that the product be refused recognition for conflict with Rule 8, without at that time taking under consideration the question whether or not it was in conflict with other rules of the Council.

In June, 1912, further consideration of Dioradin was requested. The American agent having promised a reform in the methods of advertising, the Council considered the available evidence regarding the identity and value of the preparation. Examination of evidence regarding the composition of Dioradin—claimed to consist of radium chlorid, iodoform and menthol in an ether-oil solution—showed serious discrepancies as to the amount of radium as well as to the identity and amounts of other constituents. It was further found that the experimental evidence was insufficient and biased. Then, too, in view of the difficulty of judging the effects of medicines in tuberculosis, the clinical data were unconvincing. There was nothing to prove that the reported improvements, even if they actually occurred, were to be ascribed to the mixture as a whole rather than to any one of its constituents.

As a result of these findings, the Council voted that Dioradin be refused recognition and that the publication of these facts be authorized. In accordance with its regular procedure, it

also submitted the report to the agent. In reply the agent submitted evidence which showed that he was not responsible for the misstatements about Dioradin but offered no facts that affected the Council's findings.

The entire matter having been referred to a second referee, minor modifications of the first draft of the report were authorized. Since then the Dioradin Company has submitted two reports of examinations of Dioradin made for the company in Germany showing a higher radium content than that previously found. These reports do not alter the facts brought out in the report of the Council that the composition of Dioradin has been variable, which past variability arouses a feeling of uncertainty or lack of confidence. In view of this the amended report was ordered published and appears below.

W. A. PUCKNER, Secretary.

FIRST SUBMISSION OF DIORADIN

Dioradin, a preparation for the treatment of consumption originated by Dr. R. de Szendeffy, Budapest, Hungary, was submitted to the Council by Louis Gero, Ltd., New York, with the following statement of composition:

"A radio-active preparation of Menthol, Iodin and Radium Barium Chlorid 1/10 of a drop; in ether solution."

A circular which accompanied the submission stated:

"Preparation No. 3 of Dioradin contains not only terpins but also iodin salts . . . In view of the fact that emanations of the radium as well as the combinations of the evasive iodin terpins enter into the organism through the lung . . ."

Later these indefinite statements of composition were supplemented by the following:

"In 100 c.c. there are:
1 gr. Iodoform.
5 " Menthol.
10 drops Radium chlorid solution (1 milligr. in 100 c.c. of water).
5 gr. ether.
90 " Oil (ol. amygd. frig. press)."

In a circular contained in the package these claims were made:

"The preparations of the Dioradin are based on the miraculous effects which scientific researches have shown in regard to the different sicknesses treated with radium.

"It is generally known that radium, even if externally employed, has proved itself to be a bactericidal remedy. Its effect is multiplied if one employs it internally even in infinitesimal doses, in consequence of its permanent action of emanation on the organism.

"The preparations of the Dioradin contain the radium itself. For this reason their antiseptic and bactericidal effect is much more intensive than with medicaments which contain only its emanation, which disappears in a short time."

In view of the general extravagance of the claims made for its therapeutic action the preparation was rejected without considering other possible conflicts with the rules of the Council.

SECOND SUBMISSION OF DIORADIN

Having been advised of the rejection by the Council of Dioradin the American agency, which in the meantime had become the Dioradin Co., requested further consideration. The Council therefore took up the subject again. After certain typographical errors had been corrected the following was now given as the composition:

"1 gram Iodoform.
5 grams Menthol.
10 drops Radium Chlorid Solution (containing 1 milligram of radium chlorid in 100 cubic centimeters of water).
5 grams Ether.
89 grams expressed oil of almond.
This liquid is put up in ampules containing one cubic centimeter of liquid."

In support of the therapeutic claims for Dioradin the American agent submitted literature consisting chiefly of articles by Dr. Bernheim of Paris. Before reporting on the requested reconsideration of Dioradin the referee directed the secretary of the Council to point out to the American agent that in the formula given, the amount of non-volatile matter should be about 90 per cent., whereas the report of the Lederle Laboratories which accompanied the request for reconsideration states that but 72.08 per cent. was found in the analysis. In reply the agent stated that he had called the attention of Dr. Szendeffy (the originator of Dioradin) to the discrepancies concerning non-volatile matter and that he felt sure the discrepancy was wholly accidental (*sic*). In a later communication the agent submitted a statement of analysis from the Lederle Laboratories of a new specimen of Dioradin according to which the amount of non-volatile matter agreed essentially with the amount claimed by the agent.

The referee, having examined the evidence, is of the opinion that the statement of composition is misleading and that the therapeutic claims are unwarranted, thus:

DISCREPANCIES IN RADIUM CONTENT

The chief claims for its therapeutic value are based on the radium content, yet the discrepancies and contradictions regarding this are serious.

In connection with the reconsideration of this product the agent presented a certificate of chemical examination by the Lederle Laboratories in which the following statement was made as to the radio-activity:

"Examination shows the preparation to possess slight radio-activity, corresponding in activity to less than 1-10,000 of 1 milligram of radium bromid per ampule. According to the sworn statement of Dr. A. de Szendeffy, the originator of Dioradin, the preparation contains 10 drops of radium chlorid solution (1 milligram in 100 cubic centimeters of water) in 100 cubic centimeters of the preparation. This would correspond to 5-1,000 milligram of radium chlorid in 100 cubic centimeters or about 1-20,000 of 1 milligram per ampule."

A cursory reading of this paragraph gives the impression that Dioradin possesses fully the amount of radio-activity claimed by its originator, Dr. A. de Szendeffy. This impression is greatly strengthened by the concluding paragraph of the Lederle report, which says:

"In conclusion, our examination shows that the preparation submitted to us as Dioradin possesses radio-activity, and contains a fixed oil (apparently expressed oil of almond), iodoform, menthol and ether, thus confirming the sworn statement of Dr. A. de Szendeffy in regard to the composition of this product."

On inquiry as to the method used by the Lederle Laboratories, in determining radio-activity the agent submitted a further statement from the Lederle Laboratories which describes the gamma ray test by which the determination was made and a radium value equivalent to 0.000041 mg. of radium bromid per capsule was obtained. The report then says:

"The variations of the single measurements from the mean in the case of the natural leak and the leak with the Dioradin near were so large that we did not feel justified in assigning much accuracy to the figure, 0.000041, but stated that the amount of radium per capsule could not be greater than 0.0001 mg., with the possibility of there being a much smaller amount present."

It is evident that the wording of the reports of the Lederle Laboratories is liable to give the impression that their examination confirms the claims made for Dioradin.

It is further evident from these reports that the amount of radio-active matter has not been definitely ascertained but that it is at the best very small. The unreliability of the claims for radium content of Dioradin was recently shown by Buechner,[1] who found a specimen obtained from an apothecary to contain but 1-1000 of the amount claimed.

VOLATILE AND NON-VOLATILE MATTER

The varying claims regarding the content of volatile and non-volatile matter throw doubt on the entire composition of Dioradin, for if the statement as to these is wrong the rest of the statement regarding composition cannot be given credence.

1. Buechner: Pharm. Weekblad, March 2, 1912, p. 161.

In the first submission of Dioradin about 89 per cent. of non-volatile matter was claimed but in the report of the analysis by the Lederle Laboratories, which accompanied the resubmission, only about 72 per cent. was found. Later the Lederle Laboratories reported that an examination of a new specimen of Dioradin had shown about 90 per cent. of non-volatile matter. The discrepancies between the composition claimed for Dioradin and that found for the product in the first Lederle report has shown that the agent was quite ignorant of the composition of the product which he was selling.

INDEFINITENESS OF THE IODIN CONTENT

The label on the trade package of Dioradin first submitted to the Council stated that the product contained iodoform; a similar statement was made in the submission of the product; the circular accompanying the first submission stated that "iodin salts" were contained in the product while the iodin content was referred to further on in this circular as "combinations of evasive iodin terpins." In Bernheim's papers, which have been used to advertise Dioradin, and which are referred to in the same circular, the iodin compound is called "iode peptonisé," which, according to information stated by the American agent to have come from Budapest, is to be translated "iodized peptone." What is the meaning of this confusion? One would naturally suppose that the preparation to be sold in this country contains iodoform in an ether-oil solution while the one used by Bernheim and Dieupart[2] was stated to contain an *ethereal* solution of "iodized peptone." This is another mystification, for an ethereal solution of any kind of peptone would be a novelty. The matter is of some importance, for Bernheim and Dieupart lay great stress on the difference between "peptonized iodin" and other iodin (loc. cit., p. 333) and of the superiority of ethereal over oily solutions (loc. cit., p. 334). The American agents, however, in the second submission, state that this is all a mistake; that the Dioradin used by Bernheim is the same Dioradin which was submitted to the Council; and that this does not contain, and never did contain, the ethereal solution of "iode peptonisé" to which Bernheim attached so great importance. Bernheim (report to Medical Congress of Lyons) himself has come to the same conclusion; for five months after his first paper he believes that the "special salt of radium" *(sic)* is the principal agent; so that the "peptonized iodin" must be unimportant, and in a cablegram of July 4, 1912, he now informs the Dioradin Company

2. Bernheim and Dieupart: Revue Internationale de la Tuberculose, May, 1911, p. 336.

that the formula was incorrectly given in his first papers "owing to my ignorance of actual composition;" and that all the Dioradin used by him was of the composition stated in the submission to the Council.

While this vindicates the good faith of the American Dioradin Company, it does not clear up the mystery. The question occurs at once: What led Dr. Bernheim to make such positive statements? Was he drawing purely on his imagination? If so, why did his imagination take this peculiar, special direction? Or if he did have some reason to imagine the "iode peptonisé," who supplied this reason? And if, at that time, he was given to understand by Szendeffy, who must have supplied him with the material, that it contained the iodized peptone, how can he be positive at this time, that it did not contain it? Has he actually analyzed the old material?

There is also a further question which needs to be answered. Why has Dr. Szendeffy waited until Dioradin was rejected by the Council before correcting Bernheim's serious misapprehension, in the meantime permitting the circulation of Bernheim's paper?

Until these questions have been satisfactorily answered, the element of mystery about the composition of Dioradin cannot be cleared away.

EXPERIMENTAL EVIDENCE

The available experimental evidence regarding "Dioradin" is restricted to some quotations from its inventor Szendeffy, in the paper of Bernheim and Dieupart (p. 334). These, if confirmed, would show that radium alone has practically no effect on cultures of tubercle or colon bacilli; that 0.1 gm. of "iode-menthol" (concentration not stated) checks the growth of the acid-fast organisms; and that this antiseptic efficiency can be nearly doubled by the addition of a little radium. No quantitative data are given, so that it is difficult to judge the accuracy of the observation. Granting that it is correct, it would have little bearing on the therapeutic actions of Dioradin, for there is nothing to show that the effective test-tube concentration is reached in the pulmonary tissues.

It is also claimed that the injection of Dioradin prevents tubercle infection. The referee believes that the Council and the medical profession should hesitate to accept this conclusion without further details; and these would require confirmation by unprejudiced observers.

CLINICAL EVIDENCE

The Dioradin Company submits considerable clinical data in favor of Dioradin. It must be remembered that most

favorable opinions have been published, from time to time, about scores of "consumption cures," which have mysteriously lost their efficiency when their novelty wore away. There is no more reason to doubt the good faith of those who are enthusiastic about Dioradin than of those who have been enthusiastic about other "cures." There appear to be features in the course of tuberculosis which make the judgment of therapeutic measures peculiarly difficult. It is possible that impartial clinical trials of Dioradin by tuberculosis experts appointed by the Council might facilitate judgment as to the actual efficiency of Dioradin. The referee doubts, however, whether this would advance the Council very much toward the acceptance of the substance. Such an investigation would be so lengthy, that it should not be undertaken until the Dioradin Company itself has offered at least presumptive evidence in this direction, especially in view of the adverse report recently made by Cecil Wall.[3] Ten tuberculous patients were treated by Wall in strict accordance with the method outlined to him by Bernheim, yet Wall concludes that none of the cases, though treated accurately in accordance with the instructions, can be quoted to justify any of the claims for the therapeutic efficiency of Dioradin. The Council cannot undertake lengthy investigations of this character, until it is put in possession of data which would show to its satisfaction that such investigations would probably be fruitful.

CONCLUSIONS

From investigations made, it appears that the claims in regard to the composition of Dioradin have contained vague statements and contradictions which arouse a feeling of uncertainty and lack of confidence. Until this uncertainty is cleared away, Dioradin cannot be considered as complying with Rule 1. The experimental data are insufficient and unconvincing. Some favorable clinical reports have been submitted, but the accuracy of the observations is to be questioned and they are more than offset by the negative results observed by Cecil Wall. As might be expected, other negative results, if observed, have not been submitted and there is nothing in the manufacturer's claim to show whether the improvement reported is really due to the peculiar mixture called Dioradin or to any one of its ingredients.

It is therefore recommended that Dioradin be not accepted for New and Nonofficial Remedies. In view of the extensive

3. Wall, C.: Brit. Med. Jour., July 20, 1912, p. 109.

advertising of this preparation and because of the admittedly incorrect statements in the earlier papers it is recommended that publication of this report be authorized.

FERRIC ARSENITE, SOLUBLE

Omitted from New and Nonofficial Remedies

Report of the Council on Pharmacy and Chemistry

The Council, having decided to reconsider the articles accepted for inclusion with New and Nonofficial Remedies because of their conflict with its amended rules, particularly Rule 10, took up for consideration Ferric Arsenite, Soluble. The council holds that in agreement with its refusal to accept Quinin Arsenate for inclusion with N. N. R. (See Council Reports, 1910, p. 73) the acceptance of Ferric Arsenite, Soluble, should be rescinded, for one cannot, in administering Ferric Arsenite, Soluble, give a useful dose of iron without giving too much arsenic, and vice versa, one cannot give a safe dose of arsenic without giving too little iron. The Council therefore holds that the preparation is irrational and pseudoscientific, and in conflict with Rule 10. As a matter of record the description included in New and Nonofficial Remedies 1912 was referred to the report of the Council and appear below.

W. A. PUCKNER, Secretary.

FERRIC ARSENITE, SOLUBLE—Ferri Arsenis Solubilis.—Ferric Arsenite and Ammonium Citrate.—Soluble Ferric Arsenite is Ferric Arsenite made soluble by the addition of ammonium citrate.

Soluble ferric arsenite occurs in green scale, easily soluble in water; it contains 1.06 per cent. arsenic, equivalent to 1.4 per cent. arsenous oxide, and iron, equivalent to from 15 to 18 per cent. elementary iron.

Actions and Uses.—Soluble ferric arsenite is a hematinic said to be particularly indicated in anemia complicated with malaria, in pernicious anemia and in pellagra.

Dosage.—0.03 to 0.065 Gm. (½ to 1 grain). It may be given by subcutaneous injections in the gluteal region in doses of 0.03 Gm. (½ grain) dissolved in 1 Cc. (15 minims) of water every two or three days.

TESTICLE, PAROTID GLAND AND SPLEEN

Omitted from New and Nonofficial Remedies

Report of the Council on Pharmacy and Chemistry

The Committee in charge of "Organs of Animals" reported to the Council that although the testicle has an internal secre-

tion of great importance there is so little evidence that its administration has any beneficial effects in any condition that it is recommended that the description of testicle be omitted from New and Nonofficial Remedies.

The Committee also reported that there is so little evidence that parotid gland and spleen produce internal secretions or that their administration is of value, that it recommended that the descriptions be omitted from New and Nonofficial Remedies.

The Council agreed to the recommendations and directed that as a matter of record the descriptions for testicle, parotid gland and spleen, appearing in New and Nonofficial Remedies 1912, be referred to the annual reports of the Council and appears below. W. A. PUCKNER, Secretary.

TESTICLE

Subcutaneous injections of testicular extracts were claimed to increase muscular energy from 10 to 20 per cent. Oxidation has been said to be somewhat increased and extracts of the gland have been used in obesity, but the results have been most uncertain. It has also been employed in prostatic hypertrophy and many other conditions.

PAROTID GLAND

The suggested uses are similar to those for the mammary and ovary; it has been recommended in artificial menopause, intermenstrual pain and other conditions in which the ovary or corpus luteum are used.

SPLEEN

Spleen has been used empirically in anemia, chlorosis, myxedema and various other diseases with no definite results.

THERAPEUTIC RESEARCH

The following circular letter accompanied by a reprint of the paper by Dr. Torald Sollmann "Therapeutic Research" (THE JOURNAL A. M. A., May 4, 1912, p. 1390) was sent out at the request of the Council's Committee on Therapeutic Research. The Council directed that, as a matter of record, the circular letter and the paper of Sollmann be included in the annual Council Reports. W. A. PUCKNER, Secretary.

Dear Sir:—

The Council on Pharmacy and Chemistry has appointed a Committee on Therapeutic Research, to encourage and assist the investigation of problems which promise to have some direct practical bearing on Therapeutics; especially such prob-

lems as require collaboration. The enclosed reprint will give you some idea of the objects of this committee.

The Committee would be pleased to receive suggestions from you; and if you should be doing or planning any work along this general line, the Committee would be glad to extend ny assistance in its power. It would also invite your attention to the enclosed suggestive list of problems which appear to merit investigation. Perhaps you may find there some topic which would interest you or your colleagues. It is planned to entrust the responsibility for each investigation to experienced men who will be free to plan and conduct the research, select their collaborators, and publish the results. A limited fund has been appropriated by the Association for materials and technical assistance. The results may be reprinted in the "Reports" of the Council, or in special monographs devoted to each subject.

Respectfully yours,

TORALD SOLLMANN, Chairman.
DAVID L. EDSALL.
R. A. HATCHER.
W. A. PUCKNER, Secretary,
535 Dearborn Ave.,
Chicago, Ill.

LIST OF PROBLEMS SUGGESTED FOR THERAPEUTIC INVESTIGATION

This list is submitted by the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association, to illustrate the wide choice of problems in practical Therapeutics. Those marked + are under investigation. The committee will be glad to enter into communication with competent workers who would be interested in undertaking any of the other problems, or similar subjects. Communications should be addressed to the Secretary, WM. A. PUCKNER, 535 Dearborn Avenue, Chicago.

1. Agaric Acid: Action and efficiency.

2. Antidotes: Efficiency of current antidotes, chemical and experimental. For instance:

Formaldehyd,
Cyanid,
Arsenic,
Phosphorus,
Phenol,
Various oxidizing agents on various organic poisons.

3. Antiseptic Dusting Powders: Efficiency and field (boric acid, bismuth preparations, iodoform and succedanea).

4. + Antiseptics and Germicides: Standardization.

5. + Antiseptics, Intestinal: Efficiency of.

6. Atophan: Control of claims for efficiency in gout and rheumatism, with chemical studies.

7. Bromids: Advantages and peculiarities of K, Na, NH_4, Sr, organic, etc.

8. Cannabis, domestic and imported: Clinical activity.

9. + Cardiovascular Drugs: Detailed study of clinical actions by modern methods.

10. Chloroform: Effects of impurities.

11. Citrates: Usefulness in atheroma and other calcifications.

12. Colloid Metals: Control of claims for actions and efficiency.

13. Corpus Luteum: Clinical field.

14. Diabetes Remedies: Exact clinical and chemical study of effect of reputed remedies (including pancreas, opium, arsenic, etc.).

15. Digestive Ferments: Mutual destruction.

16. Digestive Ferments, Persistence of, in the Alimentary Canal: Oral administration; persistence of activity in contents of stomach and various levels of intestine, judged by operative removal of fistulas.

17. + Digitalis Group: Cumulative action and absorption.

18. Diuretics: Relative efficiency on fluid and solids of urine, under various conditions, normal and pathological.

19. Ether: Effects of impurities.

20. Expectorants: Critical examination of clinical and experimental literature.

21. Hexamethylenamin: Influence of concentration (i. e., dosage and diuresis) on the liberation of formaldehyd in the urine.

22. Hexamethylenamin. Vesical and Renal Irritation: Literature; causative factors; influence of reaction of urine, dilution, administration of alkalies; dosage. Site of lesion.

23. Intramuscular injection, relative rapidity of absorption for various types of drugs, soluble and insoluble, also influence of site of injection.

24. Iodids on Viscosity of Blood, Action of.

25. + Iodids, relative efficiency and side effects of organic and inorganic.

26. Iodothyrin: Clinical efficiency.

27. Mercury: Absorption of different preparations from intramuscular injection.

28. Metal Poisoning, Chronic (Pb, Hg, As): Effect of iodid on elimination.

29. Mineral Waters: Critical sifting of the literature.

30. + Phosphorus Compounds: Critical literature.

31. Pituitary Extract: Clinical field (uterine, intestinal, circulatory, asthma).

32. Respiration, Clinical Effects of Drugs on, under various conditions: Strychnin; belladonna alkaloid; caffein; alcohol; oxycamphor; morphin and its derivatives.

33. + Salicylates: Causes of idiosyncrasy.

34. ÷ Salicylates: Comparison of natural and synthetic.

35. Scopolamin, Optically Active and Inactive: Relative clinical efficiency, central and peripheral.

36. Thiosinamin: Clinical efficiency.

37. Tyramin: Control of claims for.
38. Urate Solvents: Efficiency of.
39. Vanadium: Efficiency of commercial products.
40. Vegetable Drugs: Differences in varieties, time of collection, part of plant, etc. (species of apocynum, veratrum, ipecac, the solanaceous drugs, etc.).

THERAPEUTIC RESEARCH

TORALD SOLLMANN, M.D.
CLEVELAND

It is often said that therapeutics, and especially drug therapeutics, have not kept step with the progress of medical science. The reiteration of the fact may become somewhat tiresome, but it serves a useful purpose, in that it will gradually lead to a correction of the fault. An attempt in this direction is being made by the Council on Pharmacy and Chemistry through the appointment of a Committee on Therapeutic Research, and the Board of Trustees of the American Medical Association has made an appropriation for this work. This is in direct line with the basic objects of the Council—namely, the advancement of therapeutics by substituting definite knowledge for vague impressions and general "beliefs."

It is self-evident that such definite knowledge of the actions of therapeutic agents, under all sorts of conditions, is indispensable to their intelligent application. It is necessary to know their effects, and if possible the mechanism of their actions, not only in healthy animals and men, but also in the diseased conditions in which they may be employed. Every observing clinician has, of course, made incidental observations in this direction; but incidental, and necessarily more or less superficial observations, have but slight permanent value. They are apt to lead to mere vague impressions, which no one, outside of the observer himself, can utilize intelligently. They will not advance our knowledge. These matters must be investigated directly, according to well digested plans, and with the best available methods, quantitatively if possible.

The analysis of well-defined clinical data will set tempting and highly fruitful experimental problems to the pharmacologist, and his results in turn will set further problems for the clinician and thus the two will be mutually helpful toward a common advance of therapeutics. This is well illustrated by the relatively high status of the therapeutics of circulatory diseases—a field in which clinical data have been gathered with some degree of objective accuracy. Even this field is far from being exhausted—witness the confusion concerning the effects of strychnin, of caffein, of aconite and veratrum, etc.

If we turn to other fields, such as respiration and diseases, the paucity of exact observations is much more striking. There are isolated exact observations in almost all directions; but they are too much isolated, too few and too scattered, to be of much use.

The complexity of therapeutic problems demands a multitude of observations under the most varied conditions; and this generally demands a number of observers, working with common methods and with a common plan.

Moreover, much of the older work, even that of the best quality, needs repetition in the light of our present knowledge, and with modern methods. It is useless to repeat work unless we can improve on the old.

With many therapeutic problems, a critical study, sifting, and compilation of the available data would be of great value to practitioners, and indispensable as a starting-point for further investigation. This has been the experience in other departments of medical science. The paucity of such impartial literary digests in therapeutics has caused the profession to draw its information largely from abstracts circulated by interested manufacturers, which are all too often worse than useless.

The number of practically urgent problems in therapeutics is so great, and their nature so varied and complex, that the most which the members of the Council could accomplish by personal research would be inadequate to improve the situation seriously. The Committee therefore judged that it would be most useful by supporting and facilitating such researches. To this end, the Committee aims to gather data and suggestions; to transmit these to investigators interested in these lines; to bring together those who could effectively cooperate, to extend limited financial assistance where needed; in a word, to serve as a sort of clearing-house to those who care to avail themselves of its cooperation.

In practice, the Council aims to select the lines which appear most promising; to interest competent investigators to take charge of these lines; and to render to them such assistance as it can. Each research is thus supervised by some one especially fitted for the task, who is given complete liberty, responsibility and credit. The investigator may publish his results wherever he desires, but related investigations will be collected and reprinted as monographs, by the Council, for the benefit of the profession.

In the selection of problems, emphasis will be laid mainly on their feasibility and practical importance. All who are

interested are invited to submit suggestions along these lines. The following problems, which are now being actively investigated, will give some idea of the intended scope of the work. Other lines will be opened as soon as investigators can be found to undertake them.

The clinical value of cardiovascular drugs; cooperative investigation, starting with strychnin.

Relative efficiency and toleration of natural and synthetic salicylates; experimental, chemical and clinical.

Digitalis bodies: Duration of action and absorption; clinical and experimental.

Efficiency of intestinal antiseptics: A critical examination of literature as well as experimental investigation.

Critical literature of therapeutics of phosphorus compounds.

Standardization of antiseptics and germicides.

Pharmacology of commercial vanadium preparations.

Chloroform: Effects of origin and impurities on toxicity.

Organic Iodids: Fate, efficiency and side actions.

The Committee realizes that it has undertaken a very large task, the outcome of which depends on the cooperation which it can enlist, rather than on its personal endeavors. On the whole, the task is a hopeful one, provided that one does not demand immediate or startling returns. I shall not be disappointed so long as the Committee engages the active and continuous interest of even a single competent investigator.

Suggestions, applications and other communications to the Committee should be addressed to its Secretary, Prof. W. A. Puckner, 535 Dearborn Ave., Chicago.

SOME UNIMPORTANT DRUGS

Report of the Council on Pharmacy and Chemistry

The following report on "Some Unimportant Drugs" was submitted to the Council by the Committee on Therapeutics and adopted. It was directed that the report be included with the annual reports of the Council and also that a reprint of these reports along with certain other reports dealing with unimportant or worthless plant drugs be prepared.

W. A. Puckner, Secretary.

The non-official materia medica is encumbered with a collection of remedies, chiefly vegetable, many of which could well be spared. Some of these possess feeble and insignificant virtues. Others are merely equivalents for better-known and more useful drugs, and often contain the same active principles as the

drugs that they are intended to supplant. Others, again, have not been studied by trained observers, and their possible indications and limitations are not definitely known.

Although these several classes of remedies have at times obtained quite a vogue in domestic medicine, or have occasionally been used by physicians in restricted localities, they are seldom described in works on pharmacology and therapeutics and it is impossible for the physician, with the information to which he ordinarily has access, to arrive at reliable conclusions as to their real value. This fact makes it possible for exploiters of proprietaries to use these little known drugs to give a certain mystery and appearance of value and of specificity to preparations which are put on the market with claims of remarkable value based on the authority of some obscure and indiscriminating clinician. Conservative therapeutists, having never used these remedies, can oppose these claims only by saying that they are improbable; but the fact that these drugs have failed to gain or to hold acceptance by clinicians of reputation and experience is presumptive evidence that they are lacking in value.

In the accompanying memoranda the available evidence is presented regarding the therapeutic value of some of these drugs, especially those which enter into proprietary mixtures advertised to physicians. The evidence shows that some of these drugs are worthless, that others, though not worthless, are distinctly inferior, while none appears to possess any advantage over established articles.

It is recommended that this report be included in the annual report of the Council. It is also recommended that this report be prepared in the form of a reprint and that it be sent to teachers of materia medica along with the following reports of the Council which deal with unimportant or worthless plant drugs:

Cactus Grandiflorus, Rep. Council on Pharm. and Chem., 1910; The Journal, March 12, 1910, p. 888.

Echinacea, Rep. Council on Pharm. and Chem., 1909; The Journal, Nov. 27, 1909, p. 1836.

False Unicorn, Rep. Council on Pharm. and Chem., 1909; The Journal, Nov. 27, 1909, p. 1836.

Unicorn Root, Wild Yam and Wild Indigo, Rep. Council on Pharm. and Chem., 1910; The Journal, Jan. 22, 1910, p. 304.

Condurango, Rep. Council on Pharm. and Chem., 1911, p. 54.

Cineraria Maritima, Rep. Council on Pharm. and Chem., 1911; The Journal, Nov. 11, 1911, p. 1630.

Passiflora and Daniel's Concentrated Tincture of Passiflora, Rep. Council on Pharm. and Chem., 1910; THE JOURNAL, March 19, 1910, p. 983.

Succus Alterans, Rep. Council on Pharm. and Chem., 1909; THE JOURNAL, June 26, 1909, p. 2115.

Anasarcin and Anedemin, Rep. Council on Pharm. and Chem., 1905 to 1908, THE JOURNAL, May 4, 1907, p. 1535.

Erpiol, Rep. Council on Pharm. and Chem., 1911; THE JOURNAL, June 3, 1911, p. 1670.

ARBOR VITÆ.—*Thuja occidentalis* Linné.—Arbor vitæ is recommended by the eclectics for a great variety of diseases, especially of the urinary and reproductive organs. It contains an ethereal oil, also a glucosid, thujin, $C_{26}H_{22}O_{12}$. Arbor vitæ somewhat resembles savin in its properties. Internally it has been used as an emmenagogue. It has also been recommended in fevers, bronchial catarrh, rheumatism and to remove intestinal worms. For these purposes it has been administered in decoction or fluidextract. It has also been applied locally in ointment to repress fungous granulations of ulcers, to remove warts and even cancerous growths. Arbor vitæ is said to be a constituent of:

Echthol (Battle & Company).
"Eusoma" (Eusoma Pharmaceutical Co.).

BANEBERRY — EUROPEAN BANEBERRY. — *Actæa spicata* Linné.—Baneberry is closely related botanically and in its therapeutic properties to *Cimicifuga racemosa* (Linné) Nuttall, formerly known as *Actæa racemosa* Linné. Baneberry is an irritant emetic and cathartic and appears to be an unnecessary duplication for cimicifuga. Baneberry is said to be a constituent of:

Hymosa (Walker Pharmacal Co.).

BEE, HONEY.—*Apis mellifera* Linné.—The honey bee, "apis," has been considerably used by homeopathists and eclectics, and without apparent reason has been introduced into some pharmaceutical mixtures. It is asserted to be diuretic, alterative and diaphoretic. It has been claimed to be of some value in suppression and retention of urine from atony, also in urethral and cystic irritation, chronic nephritis and cystitis, menorrhagia, amenorrhea, leukorrhea, ovarian congestion, dropsy, sore mouth and sore throat, subcutaneous inflammation, urticaria, rubeola, scarlatina and rheumatism. Of this long list, practically the only condition for which it has been recommended by regular physicians, is that of rheumatism, for which the actual stinging by bees has been said to have been very useful in certain cases (Burton, E. T.: *Brit. Med. Jour.*, 1908, ii, 1678; 1909, i, 719). It is needless to comment on the therapeutic claims, which must be regarded as unsupported by real evidence, since the bee has been used in medicine as far back as the time of

Galen and at the beginning of the last century had fallen completely into disuse. "Apis" is said to be a constituent of:

Elixir Sourwood Compound (Eli Lilly & Co.).
Elixir Sourwood Compound (Parke, Davis & Co.).
Nephroson (William S. Merrell Chemical Co.).

BITTER BARK—HONDURAS BARK.—*Tariri sp. indet. (Cascara amarga).*—Bitter bark is not noticed in works on pharmacology. It has been extensively employed as an ingredient of nostrums and pharmaceutic "specialties" but deserves no attention from physicians. Bitter bark is said to be a constituent of:

Extract Trifolium Compound (William S. Merrell Chemical Co.).
Psora (Pix Cresol Co.).
Syrup Red Clover Compound (Nelson, Baker & Co.).
Syrup Trifolium Compound (Hance Bros. & White).
Syrup Trifolium Compound (Eli Lilly & Co.).
Syrup Trifolium Compound (H. K. Mulford Co.).
Syrup Trifolium Compound (Parke, Davis & Co.).
Syrup Trifolium Compound (Fred. Stearns & Co.).
Toxinol (Hughes Chemical Co.).

BLADDER-WRACK.—*Fucus vesiculosus* Linné.—This is one of a number of marine plants which are used in various parts of the world as food for man and cattle and as fertilizers and contains iodin and bromin compounds of sodium and potassium in variable amounts. It is not largely used in medicine at the present time but is considered by some to be alterative and tonic, and has been employed in goiter, glandular and joint enlargements and psoriasis, but especially to produce absorption of adipose tissue in the obese. Whatever virtues it has it seems to owe to the iodin and bromin which it contains. An extract of it has been sold under the title "Antifat." It is said to be a constituent of a number of proprietary obesity remedies. It is evident that the effects of this drug can be obtained more reliably by the use of preparations of iodin or of the thyroid gland. Bladder-wrack is said to be a constituent of:

Allan's Anti-Fat (Botanic Medicine Co.).
Hargreave's Reducing Wafers.
Hughes and Hughes' XL Reducing Pills.
Graziana Reducing Treatment.
Fell Reducing Treatment (Fell Formula Association).
Marmola (Marmola Co.).
Nelson Lloyd Safe Reducing Treatment (J. Nelson Lloyd, Ltd.).
Trilene Tablets.

BROOM CORN—CHINESE SUGAR CANE.—*Andropogon arundinaceus vulgare.*—Broom corn has been employed by the negroes of the South as a remedy for inflammatory diseases of the bladder, and has been made a constituent of certain proprietaries. No information is given regarding it in works on pharmacology or materia medica and it must be regarded as a superfluous article. Broom corn is said to be a constituent of:

Elixir Lithia and Broom Corn Compound (Parke, Davis & Co.).
Lithiated Sorghum Compound (Sharp & Dohme).

CEDRON SEED.—*Simaba cedron* Planchon.—It is the seed of *Simaba cedron*, a tree related to quassia. The variety and extravagance of the claims made for it indicate that the remedy is one which has been uncritically exploited, but which has probably simply the virtues of an ordinary bitter. Cedron seed is said to be an ingredient of:

Peruna (Peruna Drug Mfg. Co.).

CELERY.—*Apium graveolens* Linné.—It is allied to *Apium petroselinum* Linné, parsley, and has been found to contain volatile oil, sugar, mucilage and fat, and in the leaves and root, also the sweet, sugar-like substance, mannite. It is apparently inferior to petroselinum. Proprietary "Celery Compounds" usually contain but little celery. Celery is said to be a constituent of:

Celerina (Rio Chemical Co.).
Compound Elixir Celery (Nelson, Baker & Co.).
Elixir Celery Compound (Ray Chemical Co.).
Elixir Celery Compound (Smith, Kline & French Co.).
Elixir Celery Compound (Fred. Stearns & Co.).
Elixir Celery Compound (Parke, Davis & Co.).
Elixir Celery and Guarana Compound (Ray Chemical Co.).
Elixir Celery and Guarana (Parke, Davis & Co,.).
Elixir Kola Compound (H. K. Mulford Co.).
Elixir Kola Compound (Ray Chemical Co.).
Elixir Kola Compound (Parke, Davis & Co.).
Elixir Guarana and Celery (Hance Bros. & White).
Labordine (Labordine Pharmacal Co., Ltd.).
Palmetto Compound (William S. Merrell Chemical Co.).
Tablets Pepsin and Pancreatin Compound (Parke, Davis & Co.).

CLOVER, RED.—*Trifolium pratense* Linné.—The scientific standing of this plant is expressed as follows by the National Standard Dispensatory, p. 909: "During recent times, the flowers of the common Red Clover (*T. pratense* L.) have come into use as a constituent of a popular alterative compound, but we have no information to indicate that they possess medicinal properties." Red clover is said to be a constituent of:

Fluidextract Trifolium Compound (Parke, Davis & Co.).
Syrup Red Clover Compound (Nelson, Baker & Co.).
Syrup Trifolium Compound (Eli Lilly & Co.).
Syrup Trifolium Compound (H. K. Mulford Co.).
Syrup Trifolium Compound (Parke, Davis & Co.).
Syrup Trifolium Compound with Cascara (Parke, Davis & Co.).
Syrup Trifolium Compound (Ray Chemical Co.).
Syrup Trifolium Compound (Fred. Stearns & Co.).

COHOSH, BLUE—SQUAW ROOT.—*Caulophyllum thalictroides* (Linné) Michaux.—The use of the drug is derived from the American Indians, among whom it had the reputation of favoring the progress of labor. It was formerly official in the U.S.P. (1880-1890) but having failed to sustain its reputation, it was dropped from the eighth revision. It contains a glucosid, leontin, and an alkaloid, caulophyllin, as well as two resins, gum and starch. Leontin is supposed to be the active prin-

ciple. Caulophyllum is said to be antispasmodic, diuretic, emmanagogue and oxytocic. It has had some reputation in the treatment of rheumatism. Recent literature respecting this drug is mainly from homeopathic and eclectic journals but is very indefinite as to the actual pharmacologic action of the drug. Blue cohosh is said to be a constituent of:

Elixir Aletris Compound (Parke, Davis & Co.).
Elixir Aletris Compound (Ray Chemical Co.).
Elixir Dioscorea Compound (H. K. Mulford Co.).
Elixir Dioscorea Compound (Parke, Davis & Co.).
Elixir Helonias Compound (Hance Bros. & White).
Elixir Helonias Compound (H. K. Mulford Co.).
Elixir Helonias Compound (Parke, Davis & Co.).
Elixir Helonias Compound (Smith, Kline & French Co.).
Elixir Helonias Compound Cordial (Ray Chemical Co.).
Favorite Prescription (World's Dispensary Med. Assn.).
Fluidextract Blue Cohosh Compound (Parke, Davis & Co.).
Fluidextract Helonias Compound; also sold as Fluidextract Squaw-vine Compound (Parke, Davis & Co.).
Girard Uterine Tonic (Girard Chemical Co.).
Syrup Squaw-vine Compound (Parke, Davis & Co.).
Uterine Tonic (Buckley) (Abbott Alkaloidal Co.).
Uterine Tonic (Tablet) (Maltbie Chemical Co.).
Utros (H. K. Mulford Co.).
Viburnum Compound (Tablet) (Smith, Kline & French Co.).
Viburnum Compound (Tablet)) (Parke, Davis & Co.).
Viburnum Sedative (Fraser Tablet Co.).

Dogwood, Flowering.—*Cornus florida* Linné.—It contains a crystalline bitter principle, named cornin or cornic acid. It also contains a resin, gallic acid and tannin. It is a mildly astringent, aromatic bitter and stomachic. Formerly many southern physicians considered it next to quinin in efficacy as an antimalarial agent. This remedy is not needed as an addition to the simple bitters and for malarial affections quinin should be used. Flowering dogwood is said to be a constituent of:

Mitchella Compound (Dr. J. H. Dye Medical Institute).

Elder.—*Sambucus canadensis* Linné.—The dried flowers of this plant were formerly official (U.S.P., 1890). The flowers of *Sambucus nigra* Linné are official in the British Pharmacopeia. This plant has slight sudorific properties. The inner bark of the stem has been much employed as a diuretic. The fresh roots of *Sambucus canadensis* have been found extremely poisonous, producing death in children within a short time after being eaten, and with symptoms very similar to those of poisoning by cicuta. There is little evidence that this plant possesses virtues of a sufficiently definite character to justify its use in place of well-known remedies. Elder is said to be a constituent of:

Anasarcin (Anasarcin Chemical Co.).
Edema (Tablet) (Parke, Davis & Co.).
Edema Improved (Tablet) (Parke, Davis & Co.).
Edema (Tablet) (Smith, Kline & French Co.).
Elixir Stillingia Compound (Parke, Davis & Co.).
Elixir Stillingia Compound (Ray Chemical Co.).

Elixir Stillingia Compound (Smith, Kline & French Co.).
Fl. Ext. Stillingia Compound (H. K. Mulford Co.).
Syrup Stillingia Compound (Parke, Davis & Co.).

FIGWORT.—*Scrophularia marilandica* Linné.—Figwort is an American variety of *Scrophularia nodosa* which has been considerably employed in Europe. The leaves and roots are the medicinal parts and yield their virtue to water and alcohol. According to Hager the European plant has a poisonous action on the heart similar to that of digitalis, but the active constituents are not yet certainly known. Cinnamic acid is noted as one of the constituents. Externally it has been used as a fomentation. The drug is not mentioned in critical works on pharmacology. It may perhaps be a feeble substitute for digitalis, but in view of the facts that its action is so little known and that the physiologic actions of digitalis have been quite thoroughly investigated, the use of such a substitute is not to be recommended. Figwort is said to be a constituent of:

Lithiated Hydrangea (Lambert Pharmacal Co.).

FRINGE TREE.—*Chionanthus virginica* Linné.—Fringe tree contains an unstudied bitter principle. The drug is much used by eclectics and homeopathists, especially as a depurant in hepatic and syphilitic disorders. It is even mentioned by one author as a remedy of value in some cases of cancer. The claims for this remedy are not supported by experimental evidence and the clinical reports of its use fail to show indications of discriminating critical observation. It is not noticed by most pharmacologic authorities. Fringe tree is said to be an ingredient of:

Chlodrastis (H. K. Wampole & Co.).
Chionacea (Nelson, Baker & Co.).
Chionia (Peacock Chemical Co.).
Elixir Chionanthus (Special) (Parke, Davis & Co.).
Elixir Chionanthus Compound (Ray Chemical Co.).

GINSENG.—*Panax ginseng* C. A. Meyer.—It contains a large amount of starch, gum, some resin, a very small amount of volatile oil and a peculiar sweetish body, panaquilon. Ginseng appears to have the properties of a stomachic merely. It has a great reputation in China, particularly for dyspepsia, vomiting, nervous disorders and sexual impotence, but careful observers have failed to substantiate the claims made for it. Gingseng is said to be a constituent of:

Seng (Sultan Drug Co.).
Elixir Ginseng Compound (H. K. Mulford Co.).
Elixir Ginseng Compound (Special) (Parke, Davis & Co.).

GOAT'S RUE.—*Galega officinalis* Linné.—Little is known about this plant as its constituents have not been investigated. It is said by some authors to stimulate the secretion of milk,

and is largely utilized by quacks and beauty doctors. Goat's rue is said to be a constituent of:

Galactagogue (Eli Lilly & Co.).

Hair Cap Moss.—*Polytrichum juniperinum* Hedwig.—The available information indicates that this plant has not sufficient diuretic properties for inclusion among useful remedies. It is said to be a constituent of:

Elixir Sourwood Compound (Eli Lilly & Co.).
Elixir Sourwood Compound (Special) (Parke, Davis & Co.).
Fluidextract Oxydendron Compound (Nelson, Baker & Co.).
Nephroson (William S. Merrell Chemical Co.).

Horse Nettle.—*Solanum carolinense* Linné.—Horse nettle closely resembles dulcamara in its action. It has been recommended in epilepsy, but is probably of little value in this condition. It is exploited by Eli Lilly and Company in three of that firm's specialties, "Bromo-Solanum," "Femagen" and "Passolaria." Horse nettle is also said to be a constituent of:

Bromides with Cypripedium Compound (Truax, Greene & Co.).

Lettuce, Wild.—*Lactuca canadensis* Linné.—This plant appears to possess the same properties as the official *Lactuca virosa*. When collected at a favorable season, it has been employed to some extent for the manufacture of lactucarium. The lactucarium and other preparations made from this variety must be regarded as unnecessary substitutes for the official lactucarium. It should be noted that the widely used French syrup of lactucarium (Aubergier's) has, since the passage of the Food and Drugs Act, been acknowledged to contain added morphin. Wild lettuce is said to be a constituent of the following:

Fluidextract Scullcap Compound (Parke, Davis & Co.).
Syrup Cocillana Compound (Parke, Davis & Co.).
Lettuce Calmative (Nelson, Baker & Co.).

Liver Leaf.—*Hepatica triloba* Chaix.—The use of liver leaf is probably to be traced to the doctrine of signature by which the external form of the plant was held to indicate the organ over the diseases of which it has an influence. Improbability of any therapeutic value in this plant is indicated by the following statement:

The drug is nearly odorless and has a mucilaginous and slightly astringent taste. No analyst has succeeded in finding any constituent of importance. A little gum and tannin are the most noteworthy.

Liver leaf is said to be a constituent of:

Anasarcin Elixir (Anasarcin Chemical Co.).

Manaca — Vegetable Mercury. — *Brunfelsia hopeana* (Hooker) Benth.—Manaca is a Brazilian shrub of which the

bark and the root are used for medicinal purposes. The drug appears to have received no attention from pharmacologists and it is not described by critical writers on therapeutics. In view of the success achieved by mercury, arsenic and iodids in the treatment of syphilis, it is now considered to be censurable practice to use vegetable drugs of doubtful efficiency in such serious conditions. Manaca is said to be a constituent of:

Elixir Manaca and Salicylates Compound (Hance Bros. & White).
Elixir Manaca and Salicylates (Wm. S. Merrell Chemical Co.).
Elixir Manaca and Salicylates (H. K. Mulford Co.).
Elixir Manaca and Salicylates (Parke, Davis & Co.).
Elixir Manaca and Salicylates (Ray Chemical Co.).
Elixir Manaca and Salicylates (Smith, Kline & French Co.).
Elixir Manaca and Salicylates Compound (Sharp & Dohme).
Elixir Manaca and Salicylates (Truax, Greene & Co.).
Elixir Manaca and Salicylates (Fred. Stearns & Co.).
Elixir Manaca with Salicylates (Nelson, Baker & Co.).
Hymosa (Walker Pharmacal Co.).
Manacaline (Pullen-Richardson Chemical Co.).

MOTHERWORT.—*Leonurus cardiaca* Linné.—It is used as a domestic remedy but is not considered by pharmacologists. It is said to be a constituent of:

Viburnumal (Louisville Pharmacal Works).

OATS.—*Avena sativa* Linné.—For its nutritive and physical properties *Avenæ farina*, oatmeal, was formerly official (U.S.P., 1870). Sedative properties have been attributed to the oat but without anything in its composition to substantiate the claim. A proprietary, "Scotch Essence of Oats," some years ago was shown to be a morphin preparation. The "avenin" described in books is a protein principle devoid of medicinal activity. Pas Avena is another preparation claiming to contain a preparation of oat, but it is evident from the formula given that no dependence can be placed on the small amount of that plant which the preparation is said to contain. Oats are said to be a constituent of:

Alkaline Digestine (Parke, Davis & Co.).
Avenin Compound Tablets (Parke, Davis & Co.).
Avenin Compound Tablets "B." (Parke, Davis & Co.).
Chromiac Tablets (Maltbie Chemical Co.).
Digestive Tonic (Truax, Greene & Co.).
Elixir Dyspepsia Compound (H. K. Mulford Co.).
Hydron (William S. Merrell Chemical Co.).
Maizavena (William S. Merrell Chemical Co.).
Palmetto Compound (William S. Merrell Chemical Co.).

PULSATILLA.—*Anemone pratensis* Linné.—(*Anemone pulsatilla* Linné).—Pulsatilla is a remedy that was formerly recommended highly by various authors but it has now fallen almost entirely into disuse. Pulsatilla is said to be a constituent of:

Elixir Hydrastis and Cramp Bark Compound (Parke, Davis & Co.).
Genitone (William S. Merrell Chemical Co.).
Elixir Uterine Sedative (Eli Lilly & Co.).
Vibutero (Fred. Stearns & Co.).

QUEEN OF THE MEADOW—TALL BONESET.—*Eupatorium purpureum* Linné.—It is a species allied to the official *Eupatorium perfoliatum* Linné (Thoroughwort, Boneset). The root contains an acrid resin and an oil. It also is said to contain *euparin*, a yellow, neutral, crystalline principle. It is said to be a stimulating diuretic. Apparently without warrant it has been claimed to have decided power over the several uric acid diatheses. Its uses are similar to boneset and hence it may be regarded as superfluous. Queen of the meadow is said to be a constituent of:

Elixir Sourwood Compound (Eli Lilly & Co.).
Elixir Sourwood Compound (Special) (Parke, Davis & Co.).
Nephroson (William S. Merrell Chemical Co.).
Fluidextract Oxydendron Compound (Nelson, Baker & Co.).

SEVEN-BARK.—*Hydrangea arborescens* Linné.—Seven-bark was used by the American aborigines in calculous affections and is recommended by Potter and Shoemaker but without sufficient basis of evidence. Most critical authors on materia medica and pharmacology do not mention it. It is said to have been a constituent of an, at one time, widely exploited "patent medicine" called "Seven Barks." It is also said to be a constituent of:

Cystitis Tablet (Parke, Davis & Co.).
Cystitis Tablet (Smith, Kline & French Co.).
Diurol (H. K. Mulford Co.).
Elixir Hydrangea and Lithia (Hance Bros. & White).
Elixir Lithia and Hydrangea (Parke, Davis & Co.).
Elixir Lithia and Hydrangea (Ray Chemical Co.).
Elixir Lithia and Hydrangea (Smith, Kline & French Co.).
Elixir Lithia and Broom Corn Compound (Parke, Davis & Co.).
Elixir Matico Compound (Parke, Davis & Co.).
Elixir Sourwood Compound (Eli Lilly & Co.).
Elixir Sourwood Compound (Special) (Parke, Davis & Co.).
Formocystine (Schmid Chemical Co.).
Lithiated Hydrangea (Lambert Pharmacal Co.).
Lithiated Sorghum Compound (Sharp & Dohme).
Nephroson (William S. Merrell Chemical Co.).
Fluidextract Oxydendron Compound (Nelson, Baker & Co.).
Tonga-Salicyl (H. K. Wampole Co.).

SOURWOOD.—*Oxydendron arboreum* (Linné) De Candolle.—It is said to be diuretic and laxative. It is not noticed by discriminating pharmacologists and can well be replaced by other remedies. Sourwood is said to be a constituent of:

Anasarcin (Anasarcin Chemical Co.).
Edema (Tablet) (Parke, Davis & Co.).
Edema Improved (Tablet) (Parke, Davis & Co.).
Edema (Tablet) (Smith, Kline & French Co.).
Elixir Sourwood Compound (Eli Lilly & Co.).
Elixir Sourwood Compound (Special) (Parke, Davis & Co.).
Fluidextract Oxydendron Compound (Nelson, Baker & Co.).
Nephroson (William S. Merrell Chemical Co.).

SQUAW-VINE.—*Mitchella repens* Linné.—The preparations of Mitchella are said to be astringent, diuretic and parturifa-

cient; they are also supposed to favor the occurrence of menstruation. In dropsy and suppression of urine the infusion has been given, and also in dysmenorrhea, menorrhagia, etc. Squaw-vine is said to be a constituent of:

Casca-Aletris (Pullen-Richardson Chemical Co.).
Dioviburnia (Dios Chemical Co.).
Elixir Aletris Compound (Parke, Davis & Co.).
Elixir Aletris Compound (Ray Chemical Co.).
Elixir Dioscorea Compound (H. K. Mulford Co.).
Elixir Dioscorea Compound (Parke, Davis & Co.).
Elixir Dioscorea Compound (Ray Chemical Co.).
Elixir Dioscorea Compound (Fred. Stearns & Co.).
Elixir Helonias Compound (Hance Bros. & White).
Elixir Helonias Compound (H. K. Mulford Co.).
Elixir Helonias Compound (Parke, Davis & Co.).
Elixir Helonias Compound (Smith, Kline & French Co.).
Elixir Helonias Compound Cordial (Ray Chemical Co.).
Elixir Squaw-Vine and Black Haw Compound (Eli Lilly & Co.).
Elixir Uterine Tonic (Fred. Stearns & Co.).
Mitchella Compound (J. H. Dye Medical Institute).
Mother's Cordial (Eli Lilly & Co.).
Mother's Cordial (Ray Chemical Co.).
Ponca Compound (Mellier Drug Co.).
Syrup Squaw-Vine Compound (Parke, Davis & Co.).
Uterine Tonic (Parke, Davis & Co.).
Utros (H. K. Mulford Co.).
Uterotonic (Nelson, Baker & Co.).
Viburn-Ovaro (Ray Chemical Co.).
Vibrunum Compound (Tablet) (Smith, Kline & French Co.).
Viburnum Compound (Tablet) (Uterine Tonic) (Parke, Davis & Co.).
Viburnum Sedative (Fraser Tablet Co.).
Vibutero (Fred. Stearns & Co.).

Stone Root.—*Collinsonia canadensis* Linné.—Stone root is indigenous to the United States and for some time had a reputation as an antispasmodic, astringent and diuretic. It is said to possess tonic, astringent, diuretic and diaphoretic properties. The fresh root is said to produce gastric irritation with nausea and vomiting. The drug is claimed to be useful in catarrh of the bladder, leukorrhea, nephritis, dropsy, etc. The stone root preparations are said to be of use externally also. There appears to be evidence that this remedy possesses some virtues but they would seem to be such as are better exhibited by other drugs. Stone root is said to be an ingredient of the following:

Elixir Buchu and Pareira Compound (Parke, Davis & Co.).
Golden Medical Discovery (World's Dispensary Medical Assn.).
Hydron (William S. Merrell Chemical Co.).
Peruna (Peruna Drug Manufacturing Co.).

Tonga.—Tonga is a mixture of parts of different plants said to be collected by the aborigines of the Fiji Islands. It appears to consist chiefly of the inner bark of *Premna taitensis D. C.* and the stems (the roots are used, according to the statements of some manufacturers) of *Epiremnum mirabile*, Schott (*Raphidophora vitiensis*, Schott). No active principle

has been discovered in it. A small amount of volatile alkaloid has been found in epiremnum.

This native mixture of plant drugs was recommended to the profession for trial by Dr. Sidney Ringer and Wm. Murrell in 1880, but it has not fulfilled their expectations and is no longer treated by authorities on pharmacology. The fact that it is an indefinite mixture of practically unknown drugs is sufficient to exclude it from rational therapeutics. Tonga was first exploited by Parke, Davis & Co. and it has since been incorporated into a number of nostrums which are sold under extravagant claims for the relief of neuralgic pains, rheumatism, etc. Tonga is said to be a constituent of:

Elixir Tonga Compound (Hance Bros. & White).
Elixir Tonga Compound (Eli Lilly & Co.).
Elixir Tonga Compound (William S. Merrell Chemical Co.).
Elixir Tonga Compound (Nelson, Baker & Co.).
Elixir Tonga Compound (Special) (Parke, Davis & Co.).
Elixir Tonga Compound (Fred. Stearns & Co.).
Elixir Tonga Compound (Ray Chemical Co.).
Elixir Tonga Compound and Salicylates (Sharp & Dohme).
Manacaline (Pullen-Richardson Chemical Co.).
Tongaline (Mellier Drug Co.).
Tonga-Salicyl (H. K. Wampole & Co.).

Turkey Corn.—*Dicentra canadensis* Walpers.—*Bicuculla canadensis* (Goldie) Millspaugh.—(*Corydalis formosa* Auct.)—Turkey corn contains an alkaloid, corydalin. The plant also contains fumaric acid and an acrid resin. Its virtues are supposed to depend on the resin. Turkey corn is said to be tonic and antisyphilitic. The first property is to a large extent common to bitter substances, but there exists no evidence of its antisyphilitic powers. The frequent remissions in the symptoms of syphilitic affections are probably the reason why so many plants with ordinary tonic properties have unfortunately achieved the reputation of specifics for this disease. In the present state of our knowledge of syphilis, the use of vegetable "specifics" is no longer permissible. Turkey corn is said to be an ingredient of:

Alterative Blood Tonic (Parke, Davis & Co.).
Elixir Corydalis Compound (Parke, Davis & Co.).
Elixir Stillingia Compound (Hance Bros. & White).
Elixir Stillingia Compound (Parke, Davis & Co.).
Elixir Stillingia Compound (Ray Chemical Co.).
Elixir Stillingia Compound (Smith, Kline & French Co.).
Syrup Stillingia Compound (Parke, Davis & Co.).

Water Eryngo.—*Eryngium Aquaticum* Linné.—It is said to be a diuretic and sudorific (Hager, Pharm. Praxis, 1903, i, p. 1076). It is not noticed by English or American authors on pharmacology. Water eryngo is said to be a constituent of the following:

Elixir Sourwood Compound (Eli Lilly & Co.).
Elixir Sourwood Compound (Parke, Davis & Co.).
Nephroson (William S. Merrell Chemical Co.).
Fluidextract Oxydendron Compound (Nelson, Baker & Co.).

FORMIDINE

Report of the Council on Pharmacy and Chemistry

Having voted that Formidine, Parke, Davis & Co., be refused recognition for conflict with Rule 6, the Council directed that in explanation thereof the following be published in the Reports of the Council. W. A. PUCKNER, Secretary.

Report to the Committee on Pharmacology on Formidine (Parke, Davis & Co.).

ZERNIK'S INVESTIGATION

Five years ago, Dr. H. Thoms, professor and director of the Pharmaceutical Institute of the University of Berlin, and corresponding member of the Council, called the Council's attention to an analysis, made in his laboratory by Zernik (*Apoth. Ztg.*, 1907, p. 508), of "Formidine," an article introduced by Parke, Davis & Co. as "an odorless substitute for iodoform, and a powerful antiseptic."

According to Zernik's report, Parke, Davis & Co., claimed that Formidine was methylene disalicylic acid iodid, a condensation product of formaldehyd, salicylic acid and iodin, having the formula $C_{15}H_{10}O_6I_2$, that it was insoluble in water and in organic solvents, but that it gradually decomposed into its components when in contact with the alkaline secretions of the body. Zernik's examination showed that Formidine contained only 77.36 per cent. of the iodin content indicated by the formula, that contrary to claims it was almost completely soluble in alcohol and that it did not readily decompose into its constituents.

A. M. A. LABORATORY EXPERIMENTS

In view of Zernik's findings a specimen was at once purchased here in July, 1907, and examined in the Association laboratory to learn the composition of the product supplied in this country. In the circular sent out in this country the same general claims were made and the same formula was given as reported for the specimen examined in Germany. Quantitative determination showed the iodin content to be 92.50 per cent. of the claimed amount and the alcohol soluble matter to be 80 per cent.

Confirming the findings of Zernik, the specimen of Formidine examined in this country was found to be soluble in aqueous alkaline solution and in alcohol (to the extent of 80 per cent.), and not readily to be split up into its components. The iodin content, however, of the product sold in this country differed from the product available in Germany in that 92.50 per cent. of the amount required by the formula

claimed, was found. These findings were reported to a member of the Council, who was investigating formaldehyd derivatives, and at his request Parke, Davis & Co. were asked to submit evidence on which their pharmacologic and therapeutic claims were based. The reply of Parke, Davis, & Co. held out the hope that in the future they would be able to control the constitution of the product more closely; thus the firm replied:

"We are meeting with so much success in the sale of Formidine and it is proving itself to be such a very efficient therapeutic agent that we are now attempting to install special apparatus for its manufacture, which we presume will enable us to control the constitution of the product more closely than we have been able to do heretofore, when we were working with experimental apparatus and consequently under very great disadvantages. I expect to submit this product to the Committee in the very near future for their consideration and approval, but think it best to be perfectly sure of manufacturing conditions before doing so."

(Signed by J. M. Francis.)

In view of the representations of the manufacturers, that Formidine would be improved in the near future, and their promise that it would be submitted as soon as these improvements were made, no specific action in regard to Formidine was taken by the Council. At the time of the examinations just reported, however, Formidine was the subject of a considerable advertising campaign, and this notwithstanding the fact that it was confessedly in a more or less experimental stage.

THE FORMULA CHANGED

Although nearly five years have elapsed since the receipt of its letter, the firm has not yet submitted Formidine to the Council, and its investigation was therefore reopened independently by the Chemical Laboratory of the Association. This investigation shows some important changes in the chemical status of Formidine.

Formidine when first examined was said to be "methylene disalicylic acid iodid" and to have the formula $C_{15}H_{10}O_6I_2$" which indicated an iodin content of 47 per cent.; the product now purchased under the same name is said to be penta - iodo-hydroxy-benzy-dihydroxy-anthraquinone-homo-salicylic acid, and to have a formula "$C_{29}H_{15}O_8I_5$" which requires an iodin content of 56.38 per cent. While thus the composition of the product has been radically changed, the claims now made as regards physical properties and therapeutic effects are essentially the same. While the claims as to

solubility and iodin content were in a general way confirmed, as in the case of the former product, no formaldehyd reactions could be obtained by chemical means. These facts, as brought out by the chemical examination, were reported to the member of the Council who had previously considered the product. In view of the Laboratory's findings it appeared worth while to look into the pharmacologic claims. Accordingly, the following inquiries were sent through the secretary of the Council to the manufacturer:

"According to my understanding, Formidine is advertised as a 'powerful' surface and intestinal antiseptic. The advertising matter speaks of experiments on animals. Before judging the claims, I should like to see some details of these experiments. In the work of Sollmann[1] it appeared that Formidine had practically no preservative effect on blood or pancreatic suspensions, which represent fairly alkaline mediums. Likewise, no appreciable quantities of decomposition products appeared in the urine, indicating that iodin is not liberated in effective quantities in the intestine. Have the manufacturers any experiments to offset these data?"

These questions elicited the following reply:

JUNE 17, 1912.

"In response to your very kind letter of June 12, enclosing a report of an examination of Formidine, and intimating the willingness of the Council to include this under 'New and Nonofficial Remedies' under certain conditions, permit us to say that there was a time, when we first introduced Formidine and during which we were struggling with the many difficulties connected with the establishment of the exact chemical constitution of this body, and the difficulties involved in working out the details of its practical manufacture, when the kindly criticism and advice of the Council would have been very welcome.

"Inasmuch however as Formidine is now firmly established, not only in America but also abroad, and is evidently meeting the expectations of both physicians and surgeons, its recognition by the Council at so late a date is a matter of little interest to us.

"We thank you very heartily for the courtesy of your letter and beg to say that we do not care to reopen the matter for a second consideration."

(Signed "Parke, Davis & Co.
J. M. F.")

It is seen in the above reply that Parke, Davis & Co. submit no evidence for their claims regarding the action of Formidine. Instead, the firm contents itself with blaming the Council

1. THE JOURNAL A. M. A., Sept. 5, 1908, p. 823.

for acceding to its original request for postponement, and for its own failure to submit its product at the proper time, as it had promised.

Inasmuch as Parke, Davis & Co. have not submitted evidence to substantiate its claims, it is recommended that Formidine be rejected for conflict with Rule 6 (unwarranted, exaggerated or misleading statements as to therapeutic value); and that this report be published in the Annual Reports of the Council.

THE ELIGIBILITY OF PREPARATIONS CONTAINING PROTEINS PRODUCED BY ACID HYDROLYSIS

Report of the Council on Pharmacy and Chemistry

The following report was submitted to the Committee on Chemistry by a referee. Having been agreed to by the Committee, it was adopted by the Council. In order that the information contained in the report might be made more readily available, it was directed to be included with the annual Council Reports.

In regard to the eligibility of medicinal foods containing proteins modified by processes other than enzymic action, your referee reports as follows:

Much of our prejudice against artificial peptones and similar bodies dates from a time when our knowledge of the extent of protein hydrolysis and of the products of hydrolysis was very meager. "Peptones" of gastric and pancreatic digestion were supposed to be the normal end-products of such action within the body, and the only products which had nutritive value when absorbed from the intestinal tract. Products of more extended hydrolysis, such as amino acids, were considered as having nutritive value.

The cleavage products secured by moderate acid hydrolysis were known to bear resemblance to the digestion "peptones" but were not considered as sufficiently identical with the latter to be safely used.

In recent years, however, there has been a profound change of view largely brought about by the discovery of Erepsin and the recognition of the fact that in the normal intestinal digestion the cleavage goes far beyond the splitting into peptones, so-called. More or less complex polypeptids and even single amino acid groups are formed, which are now considered the normal and real end-points in digestion.

It has been rather conclusively shown that there is no substantial difference between the products so formed by enzymes, provided bacterial action be excluded, and the products secured by moderate acid hydrolysis. A few of the less resistant groups are further broken down by stronger acid action.

It has been pointed out by Abderhalden and others that nitrogen equilibrium in animals may be maintained on a diet of the products of acid hydrolysis of proteins. In some cases this apparently did not follow in experiments with casein or other single proteins, for example. But if to such products from casein, tryptophan was added, equilibrium was restored. This behavior is explained by the fact that tryptophan is easily broken up by acids, and is absent in the ordinary acid hydrolysis of casein. Other groups may be destroyed in the same way if the action is too intense.

As it appeared from some published statements of Dr. T. B. Osborne, Connecticut Agricultural Experiment Station, New Haven, Conn., he did not consider the products of acid hydrolysis as suitable for maintaining nitrogen equilibrium, the question was referred to him by vote of the Council for his opinion. (XV, 122, 127, 139, 153, 168). In Dr. Osborne's reply to the Secretary he explains that the statements made by him were not based on personal experience, but on the published papers of others, notably Abderhalden. In his letter Dr. Osborne refers to the results from Abderhalden's work, quoted above, and makes the suggestion that the acid cleavage products are probably suitable for use if the cleavage has not been carried far enough to destroy tryptophan.

This discussion is very similar to that carried on years ago regarding the use of gelatin, and more recently in the attempts to commercially exploit casein preparations as food. It was shown by practical experience that these bodies alone were not sufficient as protein foods, but in conjunction with other proteins were quite suitable. The practical difficulty with these bodies is doubtless due to the absence of tyrosin, glycin, tryptophan or other groups. Osborne cites zein as another body lacking in tryptophan; and the failure to utilize it as a complete protein food. With the lacking tryptophan added it may be used, however.

In conclusion it is recommended that the fact that a given protein cleavage product has been produced by acid hydrolysis shall not be sufficient to make it, or a preparation containing it, ineligible for inclusion in N. N. R. The *acceptance*, however, of such an artificial product, or a preparation containing it, should depend on the results of analysis showing the results of cleavage, as suggested by the work of Osborne and others, referred to above. In this connection it must be remembered that the commercial products may be made and should be made from mixed proteins, rather than from single substances such as casein or zein.

Also, having adopted this report, the Council directed that the second and third sentences of the article in New and Nonofficial Remedies 1912, on Medicinal Foods, be replaced by the following:

"The protein substances should be rendered soluble by means of enzymes or by some process which will ensure the formation of nutritious and non-toxic products. While the hydrolysis of proteins to soluble proteoses may also be effected by means of acids or superheated steam, these products should be used as medicinal foods only when their composition and behavior is known, since dangerous toxic symptoms have been reported from the use of mixtures obtained in this way."

It also voted that the requirement embodied in the recommendation of the report of the Council Committee on Medicinal Foods (Council Reports for 1905 to 1908, p. 67; THE JOURNAL A. M. A., May 11, 1907) reading "3. The label shall bear a statement whether the peptones and proteoses are produced by enzymes or otherwise" be rescinded.

W. A. PUCKNER, Secretary.

LYSOL REFUSED ADMISSION TO NEW AND NONOFFICIAL REMEDIES

Report of the Council on Pharmacy and Chemistry

Lysol is advertised to the public in a manner which the Council on Pharmacy and Chemistry considers unwarranted and dangerous. As the American agents, Lehn and Fink, refused to revise the matter to which objection was made, the Council voted not to admit the preparation to New and Nonofficial Remedies and authorized publication of the following statement of facts.

W. A. PUCKNER, Secretary.

The Council has recently adopted a rule permitting the advertising to the laity of disinfectants, germicides and antiseptics accepted for inclusion with New and Nonofficial Remedies, provided that the recommendations do not include applications to the eye, or to the gastro-intestinal and genito-urinary tracts. Among these exceptions that of the genito-urinary tract, especially the vagina, is of especial importance. The self-treatment of vaginal and uterine disease by medicated vaginal douches is likely to lead to bad results especially by delay of proper treatment and by accidental poisoning. Both poisoning and injury from caustic action are liable to occur from the use of undiluted Lysol or of too strong solutions, but even weak solutions should be used with caution, since an undue amount of the poison may be absorbed from the mucous membrane. That Lysol is not a perfectly safe substance is admitted by the manufacturers. Examples of fatal poisoning by it when taken internally have been somewhat frequent.

Lehn and Fink, though admitting the danger from the use of Lysol in strong solutions, transgress the Council's rule by recommending it for vaginal injections in suitable strength. This recommendation is decidedly inadvisable, for it is well known that many persons cannot be trusted to use a preparation with caution, and it is much better that such dangerous agents should not be used by the public indiscriminately.

INDEX OF PROPRIETARIES, MANUFACTURERS AND AGENTS