

## REPORT ON A. PH. A. DRUG EXTRACTION FELLOWSHIP.

BY WM. J. HUSA.

A year ago, on recommendation of the A. PH. A. Committee on Research, a \$1000 research grant was awarded by the A. PH. A. for research on drug extraction to be carried out under the direction of Dr. W. J. Husa, at the University of Florida. Mr. Louis Magid, B.S. in Pharmacy, M.S. in Pharmacy, a former winner of the Fairchild Scholarship, was appointed A. PH. A. Fellow on Drug Extraction. Mr. Paul Fehder and Mr. C. L. Huyek, both graduate students at the University of Florida, have also conducted research on certain phases of the general problem. The work of these three men has been under the direct supervision of Dr. W. J. Husa, who has been assisted by a special supervisory committee of ten of which he is chairman, representing the fields of pharmacy, pharmacognosy, pharmacology, chemistry, physics, plant physiology, plant chemistry and biochemistry, made up of faculty members of the University of Florida and research workers of the Florida Agricultural Experiment Station. The entire project has been under the general supervision of a sub-committee of five members of the A. PH. A. Committee on Research, consisting of Dr. H. V. Arny, *Chairman*, Dr. W. L. Scoville, Dr. George D. Beal, Dr. E. N. Gathercoal and Dr. E. Fullerton Cook.

The main purpose of the first year's work was to investigate the fundamental principles involved in drug extraction, it being recognized that much of our knowledge in this field is purely empirical. Studies have thus been made of the swelling of woody tissues in alcohol, water, glycerin and their binary and ternary mixtures in some of the newer organic solvents. For this study methods were devised for the convenient determination of the swelling of thin strips and blocks of woody tissue, as well as for powdered drugs. Studies were made of the rate of penetration of various solvent mixtures into woody tissue. The theoretical aspects of the effect of solvents on drugs were considered from several points of view, such as solvation, evolution of heat during maceration, effect of the structure of the drug, effect of solubility of the constituents, etc. The methods evolved were applied in studies of swelling and penetration using belladonna root and jalap. Studies are in progress on the rate of penetration by solvents and rate of extraction of constituents in a maceration process.

The grant having been renewed for the coming year, work has been planned involving a comprehensive study of the extraction of two drugs of different types, *i. e.*, belladonna root and jalap. The methods and principles developed in the past year's work will be applied as far as possible in the intensive study of extraction with the purpose of developing general principles and techniques which will be helpful in studying the extraction of other drugs. While it may be true that each drug presents an individual problem, it is believed that a study of fundamental principles and the development of new techniques for drug extraction research will lead to a better understanding of drug extraction and stimulate further scientific studies in other laboratories on the extraction of other drugs as well as on the scientific principles involved.

Detailed monthly reports have been submitted to the sub-committee of five, including extensive tables of data, graphs, photomicrographs, etc. Plans are under consideration looking toward a start on publication of the results within a few months in a series of papers in the *JOURNAL OF THE A. PH. A.*

The report of the Committee on the Ebert Prize was presented by Chairman Heber W. Youngken.

## REPORT OF THE COMMITTEE ON EBERT PRIZE.

Your committee has examined all of the published and unpublished papers presented to the AMERICAN PHARMACEUTICAL ASSOCIATION at the Toronto meeting in 1932. After careful consideration of the merits of each, it has decided to recommend that the Ebert Prize be awarded to Ewin Gillis and H. A. Langenhan for their splendid treatise entitled "A Phytochemical Study of *Hydrastis Canadensis*."

Aug. 31, 1933.

(Signed) { E. E. SWANSON,  
L. E. WARREN,  
HEBER W. YOUNGKEN, *Chairman*.

The report was accepted.

This completed the order of business for this Section.

The following paper, "Some Facts Concerning the Pharmacological and Physiological Action of Acetanilid," by S. T. Helms, was presented. (No discussion.)

The following papers were presented by James C. Munch:

"The Effects of Thallium on Vegetative Growth," by James C. Munch, F. R. Garlough, J. C. Ward and E. E. Horn. "The Nephrotoxic Action of Thallium Compounds," by H. J. Spencer, James C. Munch, J. C. Ward and F. E. Garlough. "The Effect of Altitude on the Action of Drugs, I. Strychnine," by J. C. Ward and A. W. Moore.

The Joint Session was then adjourned.

### THIRD SESSION.

The Third Session of the Scientific Section convened at 2:00 P.M. on Friday, September 1st, Chairman Husa presiding.

The first paper, "The Toxicology of Barbituric Acid Compounds," by Amelia M. de Ponce and James C. Munch, was presented. The paper on "Picrotoxin-Barbituric Acid Antagonism," by Amelia M. de Ponce and James C. Munch was presented at the same time by James C. Munch. (No discussion.)

President Philip congratulated the Scientific Section for its work during the year.

The following papers were presented: "Common Seeds and Their Dispersal," by L. K. Dabaker. (No discussion.) "The Fate of Mannitol in the Animal Body," by C. Jelleff Carr, Jacob E. Schmidt, Ruth Musser and John C. Krantz, Jr. It was read by Mr. Carr. (No discussion.)

The following papers were presented by James C. Munch: "The Bioassay of Picrotoxin and *Cocculus Indicus* Preparations," by James C. Munch. "A New Factor in Pituitary Assays," by Amelia M. de Ponce and James C. Munch. (Discussion will be submitted when papers are printed.)

A paper on "Synthetic Phytosterols," by Ole Gisvold and Edward Kremers, was presented by Mr. Gisvold. (No discussion.)

The next paper on "The Action of Ergot and Its Alkaloids on the Puerperal Uterus," by E. H. Stuart and E. E. Swanson, was presented by E. E. Swanson. (Discussion will be submitted when paper is published.)

"An Unusual Peppermint Oil," by Sister M. Francis Xavier and Edward Kremers, was not read because of the absence of the authors.

The succeeding papers were, "Several Organic Arsenicals," by George Doak and Edward Kremers. (No discussion.) "Oxidation and Antioxidants," by A. Lee Caldwell and Francis E. Bibbins. (No discussion.)

On account of the absence of the authors the following papers were not read: "The Preparation and Bacteriological Study of Certain Thioazole Azo Dyes," by W. A. Lott and W. G. Christiansen. "Di-beta-Bromallyl Amino Ethyl para Amino Benzoate," by W. Brake and W. G. Christiansen. "A Convenient Laboratory Method for the Preparation of Unsymmetrical Diethyl Ethylene Diamine," by W. A. Lott and W. G. Christiansen. "A Study of a New Series of Urethanes," by W. A. Lott and W. G. Christiansen. "The Preparation and Properties of 3,3'-Bis (Azometa-Phenylenc-diamine) 4,4'-Dihydroxyarsenobenzene and 3,3'-Bis (Azo-2,6-Diaminopyridine) 4,4'-Dihydroxyarsenobenzene," by A. E. Jurist and W. G. Christiansen.

C. Jelleff Carr read the paper on "The Influence of an Insulin-Free Pancreatic Extract on the Metabolism of the White Rat," by C. Jelleff Carr, James C. Munch, Jacob E. Schmidt and John C. Krantz, Jr. (No discussion.)

There was no discussion on the following paper: "Further Studies in Strychnine-Quinine Alkaloids, Antagonisms and Potentiations," by James C. Munch and Harry J. Pratt.

"Absorption of Vitamin D from the Skin," by Florin J. Amrhein, was read by the author.

Owing to the absence of the authors the following papers were not read: "The Germicidal Action of 2-Chloro-4-*n*-Alkylphenols," by F. F. Blicke and R. P. G. Stockhaus. "The Pharmacological Action of Ten Amines Related to Ephedrine and Tryptamine," K. K. Chen and A. Ling Chen.

The following papers were read by James C. Munch: "Quantitative Applications of the Modified Türck Test," by James C. Munch, Harry J. Pratt and Amelia M. de Ponce. (No discussion.) "Organoleptic Bioassays," James C. Munch, George E. Byers and Harry J. Pratt. (No discussion.) "The Mydriatic Activity of Lactucaria by the Munch Method," by James C.

Munch, Harry J. Pratt and George E. Byers. (No discussion.) It is printed in the October JOURNAL, pages 943-947.

The two following papers were read by title: "The Volatile Oil of *Hyptis Mutabilis*," by Harold W. Werner; and "The Potency of Native *Digitalis* of Oregon," by Ernst T. Stuhr and Donald Kuo-Chih Lee.

James C. Munch presented a paper on "A Critical Study of the Broom-Clark Method for the Bioassay of Ergot Preparations," by Amelia M. de Ponce and James C. Munch. (No discussion.)

The report of the Committee on the Chairman's Address was then taken up. Chairman John C. Krantz, Jr., read the report:

#### REPORT OF THE COMMITTEE ON THE CHAIRMAN'S ADDRESS.

1. The Committee wishes to commend the Chairman on his critical study of the activities of the Section so well set forth in his address.

2. The Committee approves the Chairman's recommendation to limit the reports before the Joint Session of the sections on Practical Pharmacy and Dispensing and the Scientific Section to: UNITED STATES PHARMACOPOEIA report, 20 minutes; National Formulary report, 20 minutes; other reports are limited to 10 minutes, with a maximum period of 5 minutes' discussion for each.

3. The Committee approves recommendation No. 2, empowering the officers of the Section to organize two or more divisions of the Section to hold simultaneous meetings for the presentation and adequate discussion of papers.

4. Approves Recommendation No. 3, namely, that the Council of the ASSOCIATION consider the advisability of securing funds for the purpose of supporting an adequate publication program.

5. Approves Recommendation No. 4, in part, namely, that space now devoted to the monthly printing of the roster of various organizations be made available for the publication of scientific papers.

6. Approves that the number of papers offered by any laboratory be not curtailed—the Committee on the other hand regrets that other laboratories do not publish more of their work through this medium.

(Signed) { GEORGE D. BEAL,  
G. L. WEBSTER,  
JOHN C. KRANTZ, JR.

Chairman Krantz moved the adoption of the report. F. E. Bibbins inquired whether the division of the Section into sections for simultaneous meeting is a positive order or a suggestion. The Chairman stated the officers were empowered with a prerogative.

George L. Webster believed the recommendation (not quoted), that the officers be empowered to ask the Council of the ASSOCIATION for the privilege of doing so, if the emergency warranted.

Mr. Bibbins said that was the point he desired to bring out.

E. V. Lynn inquired whether there was a place for discussing the number of papers that are presented. Chairman Husa said this could be brought up under New Business.

Chairman Krantz asked consideration of the part of the report relating to reports of the Joint Session of the Scientific Section and Section on Practical Pharmacy and Dispensing. On motion of F. E. Bibbins, seconded by James Munch, vote was called for and carried.

Chairman Krantz asked for consideration of Recommendation No. 2.

Mr. Webster stated that the vote should be to empower the officers to ask the Council for consent to hold simultaneous meetings. Move to adopt was made by James C. Munch and E. V. Lynn—carried.

Chairman Krantz asked for consideration of Recommendation No. 3, that the Council of the ASSOCIATION consider the advisability of securing funds for the purpose of supporting an adequate publication program. In due order this was adopted.

Chairman Krantz brought up Recommendation No. 4, re the roster pages to be made available for papers of the Scientific Section.

F. E. Bibbins referred to a session of Council when the value of the roster was discussed, that to reduce the publication of it would detract from its value.

E. V. Lynn inquired whether there was any objection to recommending the Recommendation.

James C. Munch stated he had discussed the subject with Editor Eberle, who said that the roster was referred to frequently by members and in correspondence.

Chairman Husa referred to the number of pages in the roster during the year. He was of the opinion that parts of the roster might be alternated. He had relinquished the chair to the Vice-President so as to discuss the proposal. After some further discussion the acceptance was put to a vote and carried.

Chairman Krantz asked for consideration of Recommendation No. 5—that the number of papers offered by any laboratory be not curtailed; the Committee regrets that other laboratories do not publish their work through the JOURNAL.

E. V. Lynn thought the papers should be curtailed. He was advised that about 25 papers were left over from last year and at this session there were many papers presented. He was of the opinion that a somewhat similar method was adopted by the American Chemical Society. Papers presented here should be referred to a Committee for study and censoring them. In many cases papers can be cut down materially and perhaps some papers should not be published.

James C. Munch said he had about twenty-one papers and that he had completed six other pieces of investigation, which are partly written up for presentation. He said, a few years ago the Scientific Section had to beg for papers for the program. The opinion of some members has been that one year there is a very large number of papers and in another year the reverse is the case.

He thought that it could be arranged by asking a contributor of a number of papers to designate the more important and this would give him longer time on the other papers.

He had six investigators with Sharp & Dohme, twenty with the Federal Government and about fifteen at Temple University. This material should be published in the JOURNAL A. PH. A. The fact that a paper is not published in this publication does not mean it will not be published elsewhere. His experience with Editor Eberle has been that he unhesitatingly tells him when a paper might better be published in another journal. In other words, the ASSOCIATION owns the papers presented here but is perfectly willing to waive publication of them if the authors or the editor feels that they should be published in some other journal. He was convinced that most of the papers presented in this Section have a direct relation to pharmacy. He did not believe that the time is ripe for deliberately curtailing the number of papers.

F. E. Bibbins inquired whether this was not the work of the Committee on Review of Papers—they are supposed to work with the Editor and review all the papers of the Section before publication.

Chairman Husa thought the discussion was bearing a little away from the motion, which is, that the number of papers from one laboratory should not be curtailed.

Dean Rivard thought that some of the papers could be printed in abstract or complete as a monograph.

After some further discussion Recommendation 6 was adopted by vote.

Chairman Krantz stated that this completed the business of the Committee on the Chairman's address. He moved the following resolution:

"That all papers presented before the Scientific Section be presented to the Committee on Review of Papers for approval before being accepted for publication in the JOURNAL. The decision of the Committee on Review of Papers shall be final, and it shall be forwarded to the Editor for communication to the author."

F. E. Bibbins moved adoption of the resolution.

E. V. Lynn asked for the meaning of the resolution.

John C. Krantz, Jr., explained that papers presented here, before being accepted for publication, shall be given to the Committee on Review of Papers who will pass on the advisability of publishing them. He thought that in some instances it would have to call on expert advice in various fields before reaching a final decision. It might be advised that papers be materially condensed, sometimes tabular matter could be omitted from the paper; it might be advisable not publishing at all. The report will be forwarded to the Editor and, in turn, he shall report to the author.

After some further discussion by Messrs. Krantz, Bibbins and Lynn, the latter moved the

insertion of the word, "must," *i. e.*, that "the papers must be referred to the Committee on Review of Papers before publication in the JOURNAL."

F. O. Taylor inquired whether the Editorial Board mentioned in the discussion is the same as the Committee on Review of Papers. He was advised that it is the same Board, not a new Board.

Heber W. Youngken asked relative to the function of the Committee on Review of Papers, whether it could indicate the title for a paper and have the right to delete certain portions of a paper.

Chairman Husa said the name should be Committee on Review of Papers. It is required that all papers of the Scientific Section be presented to the Committee for review, before publication in the JOURNAL.

John C. Krantz said the Committee would have the right to recommend changes to the Editor. Heber W. Youngken did not approve of such changes as he had inquired about; he saw great danger ahead. Dr. Krantz explained that the paper would under such circumstances be returned to the author for revision.

F. O. Taylor thought the point taken by the latter had worked very well in the American Chemical Society. In his opinion more work will be added to that of the Committee. The principle of the thing he believed to be good. Exactly how those details should be worked out would have to be left to the good judgment of the Board.

Secretary Rowe explained that heretofore there had been no condensation of papers (except as brought about by the Editor).

Mrs. W. Bruce Philip referred to a paper which she had presented to the Editor, but he replied that he could not pass on it—he would refer it to the Committee on Review of Papers. There was some discussion as to whether the Committee should be elected or appointed by the Chairman of the Section.

James C. Munch thought the appointment should be made by the Chairman. He also referred to several very long papers which had been submitted to the Section in the past.

F. O. Taylor agreed with the former as to appointment.

The resolution was again read by Chairman Husa; he asked Dr. Krantz relative to the name of the body; he replied that it is "The Committee on Review of Papers." The resolutions read as follows:

"*Resolved*, That all papers presented to the Scientific Section must be referred to the Board of Review of Papers of the Scientific Section for approval before being accepted for publication in the JOURNAL."

The decision of the Board of Review of Papers shall be final. It shall be forwarded to the Editor for communication to the Author.

A motion to adopt was seconded and carried by vote.

John C. Krantz moved that all papers to be published under the Scientific Section in the JOURNAL must be referred to the Board of Review of Papers of the Section. Seconded by James C. Munch, and carried by vote.

C. Jelleff Carr referred to the *Journal of Biological Chemistry*, in which the inside of the cover page is devoted to the type of Journal reference and various information of the authors. He suggested a small committee to study possibilities along this line. James C. Munch made a motion that these suggestions be referred to the Committee on Review of Papers for rejection or approval at the next meeting. It was carried by vote.

He moved that the reports of the members of the Committee on Monographs be presented as part of the minutes of the Joint Session of the Scientific Section and the Section on Practical Pharmacy and Dispensing, when these monographs are completed. The motion was seconded by John C. Krantz, Jr., and after some discussion was carried by vote.

The two following papers were read by James C. Munch, "A Critical Study of the Broom-Clark Method for the Bioassay of Ergot Preparations," by Amelia M. Ponce and James C. Munch. "Antidotes. I. General Plan," by F. E. Garlough and James C. Munch.

"The Application of Statistical Methods to Pharmaceutical Research. IV. Methods of Recording Drug Action," by James C. Munch and F. E. Garlough.

George O. Doak inquired relative to the chemical poison in Red Squill. The author replied that it was not an alkaloid and he was not certain whether it was a glucoside. Little is known

about the solubility of the active constituent, and considerable relative to the pharmacological action. The workers had been able to obtain a product that resembles a glucoside more closely than any other group.

F. F. Berg presented the report of the Committee on Nominations.

On motion of James C. Munch and seconded by G. L. Webster the Secretary was instructed to cast a unanimous ballot of the Section for the officers named in the report. The Secretary was so instructed and the following were declared elected officers of the Section:

*Chairman*, F. E. Bibbins; *First Vice-Chairman*, E. V. Lynn; *Second Vice-Chairman*, H. M. Burlage; *Delegate to the House of Delegates*, Wm. J. Husa. The officers were presented and duly installed.

Chairman Bibbins thanked the members of the Section for the honor conferred and he asked for coöperation of the members. The other officers of the Section briefly expressed their appreciation for the honor conferred.

Chairman Husa asked whether there was any new business.

James C. Munch stated that at the time the Committee on Monographs was appointed the thought was that the reports could be presented by the respective authors, before the Joint Session of the Scientific Section and the Section on Practical Pharmacy and Dispensing. He thought it was probable that the first monograph on Aconite will be completed before the next annual meeting. In his opinion, provision should be made on the program and each of the authors of each monograph should be given five or ten minutes to state what had been done, so that the ASSOCIATION might have an idea of the work accomplished. These monographs will have to be published and sold at a price to defray the expenses.

Chairman Husa relinquished the chair. He wondered whether the action would be premature.

Dr. Munch stated that if arrangements were made to provide place on the program it would arouse interest. It was not expected that the A. P. H. A. would finance the cost of the publication. Such arrangements will probably be made outside of the ASSOCIATION and orders solicited for copies of the monographs and this discussion will enable the Publication Committee to form an idea as to the approximate demand for copies of the monographs.

The Final Session of the Scientific Section was then adjourned.

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## SECTION ON PRACTICAL PHARMACY AND DISPENSING.

The First Session of the Section on Practical Pharmacy and Dispensing was called to order by Vice-Chairman, Marvin J. Andrews, because of the absence of Chairman W. Paul Briggs, Thursday, August 31st, at 9:00 A.M. (Chairman Briggs could not attend because of the serious illness of his mother.)

The Secretary's report follows:

### REPORT OF THE SECRETARY.

The Secretary's report writes itself rather well in the program of the Section; therefore, an extended résumé is not needed at this time. The work has been interesting and while at times it may have seemed somewhat discouraging, yet slowly but surely it was accomplished and the program completed.

Two items which the Secretary hopes will become a part of future procedure: *First*, that all members contributing papers will forward to the Secretary by July 1st, the title and a short abstract. If this is done the preparation of the official program is greatly facilitated. *Secondly*, the establishment of a Registry Book to be signed by all persons interested in the work of the Section, with their addresses. This offers a means of building up a membership in the Section and developing an interest in the advancement of our part in pharmacy.

Thanking the members for their help in building the program for these sessions the Secretary voices the views of the officers in saying that they have been very happy to serve.

R. E. TERRY, *Secretary*.

On motion duly seconded report was received and accepted as read.

The Chairman appointed as members of the Committee on Nominations: L. W. Rising, C. V. Netz and H. M. Burlage.

The reading of the papers was proceeded with as follows:

"Variations in Hand Moulded Hypodermic Tablets," S. W. Bower. (No discussion.)

"Amaranth as a Substitute for Cudbear," by Sherman W. Morrison.

Dr. Bernard Fantus expressed his appreciation of the work. He stated that the colors of medicine had a psychological effect on the patient and it should be possible to provide standards for colors; that crude drugs should be abandoned in favor of more definite compounds.

Wm. Gray suggested that the selection of the coloring be considered in providing a standard. The author showed samples of the alkaline and acid solutions of amaranth and cudbear and noted the differences in the colorings.

"The Preservation of Halibut Liver Oil with Hydroquinone," by W. S. Jones and W. G. Christiansen was read by F. W. Nitardy. H. M. Burlage inquired whether two different portions of halibut oil might not react differently. Mr. Nitardy stated that the un-refined oil is more stable; that some of the natural protective properties are removed in refinement, and it was important to have a method of protecting the refined oil.

F. W. Nitardy summarized the following papers: "A Phenyl Derivative of Dulcin as a Saccharin Substitute," by T. B. Grave, J. Lee and W. G. Christiansen. "A Comparison of the Effect of Phenyl Ethanolamine and Ephedrine on Nasal Membranes," T. B. Grave and W. G. Christiansen. "The Germicidal Value of Some Unsymmetrical Dialkyl Resorcinols," by S. E. Harris and W. G. Christiansen. "Local Anesthetics—Phenyl Procaine," by W. Braker and W. G. Christiansen.

Wm. J. Husa presented the paper, "The Accuracy of Medicine Droppers with Flared Tips," by Wm. J. Husa and Lydia M. Husa. (The paper is printed in the October issue, page 975.) In commenting, F. W. Nitardy said that tincture of digitalis is commonly prescribed in drops. Such dosage should be designated in minims. Wm. Gray stated that some doctors recognize these differences and prescribe a pipette, accordingly.

Irwin A. Becker inquired if the angle of the dropper had been taken into consideration. Dr. Husa replied that the experiment only considered drops from the straight position and that the angle might influence the results. It is necessary to understand the doctor's intention in such prescriptions. The hope was expressed that the authors would continue the studies.

The following paper was presented.

"The Protection of Prescription Labels with Lacquer," by Wm. J. Husa and Lydia M. Husa.

William H. Glover inquired relative to the author's experience with preparations containing camphor and oil. William Gray recommended the use of flexible collodion as well as lacquer. I. A. Becker thought that two coats of collodion and two coats of lacquer would prove of value. F. W. Nitardy suggested a solution of acacia. He preferred a bottle with a lip that would prevent dropping on the side of the label. W. J. Husa stated that U. S. P. collodion had been used for coating labels. He referred to a variety of lacquers. He also spoke of a case of poisoning because of unreadable labels. Charles H. Gauger said that when a bottle is returned for refilling the label coating should be removed so as to make certain of the correctness of the number. Dr. Husa stated that his experience was that different firms handle prescriptions differently. Some are very careful and others are not.

I. A. Becker spoke further on the application of the coating.

The paper on "Sulphurated Lime Solution," by R. A. Cain and H. A. Langenhan was presented. (Further work on this solution is being carried on.)

H. C. Newton inquired whether the process produced a more stable product.

Mr. Cain stated that the method results in some crystallization. Wm. Gray commented, that the solution can be kept almost indefinitely in well-stoppered bottles.

Charles H. Gauger referred to a prescription of a dermatologist requesting that 10 drachms of the solution be evaporated to 6.

S. W. Morrison said that making the solution accord with the National Formulary and then washing the crystals with hot water resulted in their solution.

The following three papers were presented by title:

"Dental Drugs Accepted and Rejected," by George C. Schicks.

"Useful Dental Prescriptions," by A. O. Michelsen.

"It Can Be Done," by J. Leon Lascoff. (Printed in the October number of the JOURNAL, page 970.)

"Miscible Fluidextract of Ipecac," by W. G. Crockett and J. A. Reese. (It is printed in the October JOURNAL, page 968.)

"Determination of the Reasonable or Permissible Margin of Error in Dispensing. II. Ointments," by Marvin J. Andrews. Discussions will be included with the printed paper.

The First Session of the Section on Practical Pharmacy and Dispensing was then adjourned.

#### SECOND SESSION.

The Second Session of the Section on Practical Pharmacy and Dispensing was convened by Vice-Chairman Marvin J. Andrews, Friday, September 1, at 2:00 P.M.

The first paper was "Prescription Accuracy as Shown by State Board of Pharmacy Examinations," by R. L. Swain. The author stated that he had worked with Mr. Andrews and some of the findings were included in the latter's paper on "Determination of the Reasonable or Permissible Margin of Error in Dispensing," published in the JOURNAL for August and September 1933.

Emerson D. Stanley inquired whether there might not have been greater accuracy for the prescription if it had contained more potent ingredients. The author stated there are unlimited and infinite possibilities for deviations. He hoped that greater accuracy obtained in prescriptions containing more potent drugs. The author stated that extensive study was being made, and referred to a Maine case where the compounding had been carelessly done. In this case the court reviewed various methods of weighing and dividing powders. Charles H. Gauger stated that in their laboratories at the school they found an average error of about 10 per cent.

D. F. Jones inquired whether the error in many cases might not have been attributable to trituration.

The author expressed great interest in the work of Mr. Andrews whereby it was hoped to establish a tolerance limit.

L. W. Rising inquired whether any check had been made on therapeutical differences arising out of deviations. Mr. Andrews thought that the deviations in that respect were not large.

The following papers were presented by title:

"Comparison of Karaya Gum and Tragacanth," by L. F. Gabel.

"Aromatic Elixir," by L. D. Havenhill and M. G. Smolt.

"Magnesium Salt of Tribrom Ethyl Sulphuric Acid," by E. Moness and W. G. Christiansen.

"A Comparison of Neoarsphenamine and Sulfarsphenamine When They Are Dialyzed," by A. E. Jurist and W. G. Christiansen.

"The Solubility of Potassium Chloride in Aqueous Potassium Iodide Solutions," by S. E. Harris and W. G. Christiansen.

"Study of Germicidal and Antiseptic Activities of Some Derivatives of 8-Hydroxy-Quinoline," by E. Moness and W. G. Christiansen.

"Study of Germicidal and Antiseptic Activity of Some Mercury Compound," by E. Moness, S. E. Harris and W. G. Christiansen.

"A Preliminary Study of Capsule Tolerances," by Wm. F. Reindollar.

F. W. Nitardy presented a paper on "Method and Apparatus for Producing Activated Petroleum Products (radolatum)," a petroleum product activated by ultraviolet irradiation.

R. E. Terry inquired relative to the length of time the material retains its activity. The author replied that the material was about a year old and had retained its activity. The limit of time had not been determined. He stated that more hospitals were trying to make this product. Working in coöperation with Dr. Eising he found that the U. S. P. petrolatum cannot be used. He also described the construction of the lamp and other parts of the apparatus.

The author referred to cases in which the preparation had been used for wounds that had resisted healing and responded to application of this preparation.

President Philip entered the room and expressed appreciation of the work of the Section.

Reading of papers was continued: "The Relationships of Prescription Incompatibilities of Pharmacy," by Leon W. Richards.



R. E. Terry commented on the study of incompatibles. Rowland Jones stated that there was little difficulty in interesting the physician in bringing about the correction of an incompatibility.

Dr. Fantus said that the doctor should be approached diplomatically.

"Hydrogen-Ion Concentration of Certain Galenicals," by C. Jelleff Carr and John C. Krantz, Jr., was read and discussed. (Discussion will be printed when paper is published.)

There was no discussion of the following papers:

"A Study of Aromatic Elixir," by C. O. Lee and Marshall Close.

"A Study of the Antiseptic Properties of Phenol Ointments," by R. O. Crow and C. O. Lee.

"A Study of Ointment of Belladonna," by C. O. Lee and H. C. Hoch.

"A Study of the Precipitate of Fluidextract of Uva-Ursi," by C. O. Lee and J. E. Bell.

The following papers were presented by title, "A New Method for Debittering Cascara Sagrada Extracts," by August J. Pacini.

"Absorption of Acids by Charcoal," by Saul Caspe.

"A Practical Enteric Coating for the Retail Pharmacist," by F. S. Bukey and Phyllis Rhodes.

"Aromatic Elixir," by L. D. Havenhill and M. G. Smolt.

R. L. Jones inquired relative to the use of formaldehyde as an enteric coating for capsules.

Marvin J. Andrews referred to a number of papers presented at various sessions of this Section. Wm. Gray stated that the treatment of gelatin capsules with formaldehyde makes them hard. An informal discussion on collapsible capsules followed.

R. E. Terry suggested that the incoming officers study the practicability of forming a committee of the Section on Prescription Tolerances.

The report of the Committee on Nominations was presented, nominating M. J. Andrews, *Chairman*; R. W. Clark, *Vice-Chairman*; R. E. Terry, *Secretary*, and L. W. Rising, *Delegate to the House of Delegates*. There being no other nominations the nominees were duly elected and installed.

The officers expressed their appreciation of the honor conferred. The Section was then adjourned.

For *Joint Meeting of Scientific Section and the Section on Practical Pharmacy* see under preceding minutes—that of *Scientific Section*. For *brief report of the Section to the House of Delegates*—see page 1056, *October Journal*.

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## SECTION ON COMMERCIAL INTERESTS.

### FIRST SESSION.

The First Session of the Section on Commercial Interests was convened on Wednesday, August 30th, at 2:30 P.M. The meeting was called to order by Vice-Chairman John A. J. Funk, in the absence of Chairman Leon Monell. A communication from the Chairman was read by Secretary Henry Brown, explaining that, because Mr. Monell was in attendance at a conference in Washington on the Retail Drug Trade Code, he would be unable to attend the session. His greetings and regrets were extended.

Secretary Henry Brown reported on a meeting of the Section on Commercial Interests, following the close of the sessions in Toronto. A meeting was also held in Boston to talk over the program for 1933. A third meeting was held in Scranton on April 13th; at this meeting it was urged that there be a diversification in the program of papers and the Secretary was instructed to notify contributors of papers to send them in promptly.

On motion of O. E. Russell, seconded by F. W. Meissner, the report of the Secretary was accepted as read.

The Chairman *pro tem* appointed the following Committee on Nominations: C. Leonard O'Connell, Florin J. Amrhein and Rowland Jones.

A paper, "The Prescription Defined," was read by Dr. Anton Hogstad, Jr., defining the prescription as a set of instructions from the physician to the pharmacist, belonging in no way to the patient. As such, the prescription is a confidential document and examination by detail

men or by other physicians should not be permitted. The use of a drawer or secret file should supplant the spindle commonly used. Common carelessness of physicians, due to ignorance of pharmaceutical Latin and inadequate training offered by medical schools, should be tactfully remedied by the suggested use of the telephone where the pharmacist is permitted to ask questions and to double check the physician.

The dispensing of information to physicians on other prescriptions is especially a violation of the confidential relationship defined. Such information is available to the physician either through consultation of the physician writing the prescription or a copy which the patient may obtain.

The use of the prescription blank as an advertising pad which the physician utilizes as a scratch pad is another practice to be discouraged by the incorporation of dignity in this division of the profession.

The assignment of a definite appointed hour to the detail men will also add order and prevent the spending of unnecessary time in the store.

A lengthy discussion followed the presentation of this paper. Rowland Jones supported Mr. Hogstad's suggestion on the use of the prescription blank. He has found that the blank without the pharmacist's name is decidedly successful. He does not carry them to the physician's office, but provides and recommends a prescription blank for each physician with the name in the lower part. The name of the patient in the upper right hand corner may be offset by the name of the druggist inconspicuously placed. Privacy in the use of the blanks was also recommended.

F. W. Meissner commented that the perusal of the prescription file by the physician brings about a lack of confidence in the pharmacist on the part of the physician.

Mr. Hogstad suggested the appointment of a committee to offer a series of educational measures for next year.

The results of the handing out of samples left with the physicians were cited by George Judisch; eight cases of self medication resulted from the passing on of information by a patient who had received such a sample. A telephone conversation heard over a rural line was followed by demands upon the pharmacist for the prescription mentioned.

A symposium on uniformity of procedures was the suggestion of Mr. Hogstad.

Mr. Nelson discussed the open display of the prescription department at the Century of Progress Exposition. The student in charge of the exhibit operates in silence, only occasionally delivering a lecture which prompted many intelligent questions. The exhibit has been a success and suggests that a visible prescription department may be profitable for observation purposes, but should not be used for instruction of the purchaser.

It was moved by Rowland Jones and seconded by many that the paper be accepted and the recommendations considered by the officers of the section.

Dr. Frank A. Delgado, business specialist of the chemical division of the Bureau of Foreign and Domestic Commerce of the United States Department of Commerce, next presented a paper on "Proportion of Drug Store Sales Devoted to Public Health—A Summarization of Retail Drug Distribution Facts Derived from the First Census of Distribution."

According to the data assembled in the first nation-wide Census of distribution taken in 1929 approximately 50 per cent of the sales of the 58,258 drug stores in the United States is devoted to prescriptions, drugs and patent medicines, rubber goods, surgical and hospital supplies and other products associated with the professions of medicine and pharmacy and the preservation of public health. Of the sales of drug stores 23 per cent are made in the Northwest central part of the nation and 22 per cent in the Northeast section. Climate has apparently no effect on total drug store sales, and per capita figures must be treated advisedly. The costs of doing business were taken up in detail.

Mr. Hogstad moved that a vote of appreciation be given Dr. Delgado for his valuable contributions and to Mrs. Delgado for her part in such contributions.

Prof. Paul Olsen, presented a paper on "The AMERICAN PHARMACEUTICAL ASSOCIATION and the Drug Institute of America, Incorporated." The paper was freely discussed by George Judisch, F. W. Meissner, Henry Hein, Rowland Jones and the author.

The First Session of the Section on Commercial Interests was then adjourned.

## SECOND SESSION.

The Second Session of the Section on Commercial Interests was held Thursday, August 31st, at 9:00 A.M. The meeting was called to order by Vice-Chairman Funk. The following papers were presented and discussed: "Publicity and the Pharmacist," by Miss A. E. Garvin; "Profits and Prophet," by C. Leonard O'Connell; "Actual Time and Costs of Some U. S. P. and N. F. Preparations," by Henry Brown; "National Drug Store Survey—Drug Retailing," by Charles F. Beach; "Pharmacy," by William Rodman.

Following the reading of Mr. Rodman's paper a recommendation was made that the Section on Commercial Interests provide for a committee to study the subject of "visible prescription departments."—Carried.

The Committee on Nominations presented the following names for officers of the ensuing year: *Chairman*, John A. J. Funk, Indiana; *Vice-Chairman*, Henry Brown, Pennsylvania; *Secretary*, Wm. Rodman, New Jersey; *Delegate to the House of Delegates*, Russell B. Rothrock, Indiana.

On motion duly seconded, there being no further nominations, the nominees were elected. The officers expressed their appreciation of the honor, following their installation.

The Section recommended that a committee be appointed to study the subject of Prescription Departments, and a motion was made by C. Leonard O'Connell, seconded by Anton Hogstad, Jr., that the Chairman of the Section appoint a Committee on Prescription Department.—Carried.

The Section on Commercial Interests was then adjourned.

## SECTION ON HISTORICAL PHARMACY.

## FIRST SESSION.

The First Session of the Section on Historical Pharmacy was called to order by Chairman Louis Gershenfeld, at 9:25 A.M., August 31st. The first order of business was the reading of the Chairman's address—"Why the History of Pharmacy?" J. T. Lloyd presided. The address follows:

## WHY THE HISTORY OF PHARMACY?

BY LOUIS GERSHENFELD.\*

Custom decrees that the chairman of your section shall at the interval of a year following his service deliver before you appropriate remarks. It has occurred to me that I could best command your interest to a brief consideration of data which concern this section and which as a problem must sooner or later concern every scientific worker associated directly or indirectly with pharmacy. No occult reason for the title of these remarks lies behind them. Perhaps the only thought I would like to convey in some slight degree is to again demonstrate that to understand and appreciate pharmacy to its fullest extent you must understand and appreciate its history. History has a real lesson to teach which I think many in pharmacy have learned too late and even more have not learned at all, though greater progress is being made to-day. It was Cervantes who said: "History is the depository of great actions, the witness of what is past, the example and instructor of the present and the monitor of the future." Goethe has expressed himself by stating that "the history of a science is science itself." The great discoverers themselves with few, if any, exceptions do not fail to acknowledge that without the work of their predecessors their achievements would not have been possible.

It is indeed to be regretted that there are some men of science who doubt the value of the history of their respective subjects. They find therein merely a pleasing branch of literature, and accordingly they may even question the wisdom of devoting any time to its study. One may possess the historic spirit but be lacking a knowledge of the facts of history. The errors, the trials and tribulations and the steps of the real progress of any branch of science not only record its evolution but make possible a better understanding and appreciation of its existence and progress. If we have no proper appreciation of the previously existing conditions and upon which new principles are imposed, considerable value may be lost and, in fact, one may never understand what these new principles challenge.

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\* Chairman, Section on Historical Pharmacy.