

# THE DEPARTMENT OF THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

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DEPARTMENT.

*Editor's Note:* Could we confine our attention to the medicinals and preparations that are official in the U. S. P. and N. F., our teaching would be very much lightened. It is disappointing to the young graduate to go into a prescription pharmacy and find that a great deal that he had learned about U. S. P. and N. F. medicinals will be of little use to him because of the infrequent calls for them on prescriptions. There is no question but that it has become incumbent upon our colleges of pharmacy to give considerable attention to non-official medicinals if we wish our students to be successful in the prescription department. It is difficult to determine just how much time should be given to a study of these preparations. It is impossible to cover the total number thoroughly and the teacher must select for the purpose of study those that he thinks are most important. The following papers by Professors Andrews and Clark will be of interest to those who are confronted with this problem.—C. B. JORDAN, *Editor*.

## THE PLACE OF SYNTHETICS AND PROPRIETARY REMEDIES IN THE CURRICULUM OF A COLLEGE OF PHARMACY.

BY A. H. CLARK.\*

In the recent Prescription Ingredient Survey by Gathercoal, it is shown that about one-third of all the different items occurring in prescriptions are proprietary. When we consider that the average pharmacist sells many proprietaries that are never prescribed, it is safe to say that half the number of items sold are proprietary. If we add to this a number of items that are listed in the Survey mentioned above as U. S. P. or N. F. and which are really "synthetic" remedies, and the great number of synthetics that are used in hospitals and otherwise, and are not official in either the United States Pharmacopœia or National Formulary, the importance of a knowledge of these two classes of medicaments cannot be denied.

Granting, then, its importance, how can such a subject be best handled in a college of pharmacy? There are no doubt various ways that will prove satisfactory, and no doubt the method must vary with varying conditions in the different institutions. The writer wishes to express his views in the hope that some may have their interest stimulated to such a point that they will undertake to give instructions in this line, and that the manner in which the subject is handled by him may prove helpful to others.

The prime purpose of such a course should be to give the student an opportunity to acquire some knowledge of synthetic and proprietary remedies. There are two ways to attain this end, the first one being to discuss all such medicaments in the regular courses in organic chemistry where they fit in with the subject matter of such a course. Anything like a thorough treatment of proprietaries and synthetics greatly increases the hours devoted to the regular courses, which is objectionable in many cases. Such a method is impractical in some cases, since the regular courses in organic chemistry are given by teachers unfamiliar with the special pharmaceutical aspects of the subject. Furthermore, such a method does not

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sufficiently emphasize the subject of synthetics and proprietaries, and students fail to get an appreciation of its value and are unable to remember the desirable things because they are subordinated to the general topic of organic chemistry.

The second, and by far the most satisfactory method, is to present the subject in a special course, and here two lines of action are open. In either case the subject should be presented after the regular courses in organic chemistry are finished. One method is to group these medicaments according to their therapeutic action. The writer has tried this and while it is very acceptable to medical students it lacks many of the advantages of the method followed for many years which is given below.

These medicaments are classified according to their constitution, and arranged in groups, according to the system of grouping used by most organic texts. Since a student has a knowledge of the entire field of organic chemistry, both aliphatic and aromatic substances may be grouped together, for example *all* the aldehydes, acids, alcohols, etc., may be studied at once and their properties compared. If a medicament is heterogeneous in character, it may be placed in any one of several groups according to the teacher's best judgment. If it is a pharmaceutical mixture it may be treated under the group to which its most important constituent belongs. A great deal of latitude is allowed in this classification, as for example, chloral may be treated among the aldehydes, or the halogen derivatives, as may seem desirable. Barbiturates may be discussed under urea derivatives, or given a special class. Arsenicals may all be treated in one group, or the various types under their particular class. Very frequently a combination of chemical and therapeutic character is desirable as in the case of local anesthetics.

The writer has found the greatest advantage of this mode of treatment, regardless of the finer details upon which there is much room for differences of opinion, to lie in the fact that when it is given to senior students, it affords a most excellent method for review of the entire field of organic chemistry. By emphasizing the relationships of these medicaments to the various classes of organic substances, and the fact that their properties are usually due to the characteristic class structures present, the student must refresh his mind about these properties in order to see the connection. Finally, as time permits, there is no limit to the interesting discussions of the relationship between therapeutic activity and chemical constitution that may be introduced in a course arranged in this way, and there is no branch of chemistry that lends itself to the seminar system of instruction so well as this does, providing the class is not too large. There is no limit to the interesting discussions, investigations, reports, outside assignments of work, library reading, etc., that a small group can indulge in, if wisely directed by the instructor in charge of such a seminar.

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#### METHOD OF APPROACH IN TEACHING THE PHARMACY OF NEW AND NON-OFFICIAL REMEDIES.

BY MARVIN J. ANDREWS.\*

For the past several decades, it seems that the chemical and pharmaceutical manufacturers have been trying to surpass one another in the production of new

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