

- I. More adequate use should be made of the professional knowledge and skill of pharmacists by such methods as: (a) increasing the opportunities for prescription compounding through elimination of the prescribing of branded products by physicians; (b) permitting the instruction of drug store customers in the proper use of medicines which are purchased for self-medication, but not to the extent of diagnosing patients' ailments or recommending medicines based upon description of symptoms; (c) arranging for the distribution by the pharmacist of general health information prepared by health departments, both with regard to medicines and general matters of hygiene; (d) arranging for the distribution of information to the public concerning the availability of physicians and hospitals, on the basis of lists of physicians provided by local medical or hospital associations.
- II. Agencies should be established to prepare and disseminate accurate information concerning the proper use of selected lists of "home remedies" appropriate for self-medication. The lists should be established by a committee of physicians and pharmacists of unquestioned reputation and standing; the distribution of the literature may be accomplished by health departments, hospitals, drug stores, or appropriate lay associations. Universal and unnecessary use of home remedies, "patent medicines," and other self-prescribed medicine should be vigorously discouraged.
- III. Secret-formula drugs and medicines should be abolished through the compulsory disclosure on the label of the kind and quantity of medicinal ingredients. Individuals or enterprises which have developed new and distinct preparations should be financially protected by appropriate privileges granted by the United States Patent Office or by a disinterested agency established for the purpose.
- IV. All manufacturers of drugs and medicines, regardless of class or kind, should be required to operate under annual licenses to be granted by the federal government upon the fulfilment of satisfactory conditions with regard to competency of personnel, equipment and sanitary surroundings, and standardization of finished products.

Pharmacists have been urged at various times to become politically-minded in order to conserve their rights and privileges.

It would seem that the real need of the moment is to remain professionally-minded and as rapidly as possible to become inter-professionally-minded for it is certain that professional pharmacy cannot progress independently of medicine and the other health professions.

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#### THE NEED OF HIGHER EDUCATIONAL STANDARDS.\*

ADDRESS BY A. J. WILKINSON, CHAIRMAN OF THE COUNCIL OF THE C. PH. A.

On account of the qualifications required by the various provinces of Canada to enable one to enter upon the practise of Pharmacy, it must be conceded that the men who have conformed to these legal requirements and fitted themselves to become licentiates in Pharmacy are surely entitled to be classed as professional men; but I think I hear some of you say that the public still looks upon us as merely shopkeepers who are receiving handsome profit on the sale of our merchandise—shopkeepers who have wasted several years of our lives at college in order to obtain a license to stay open upon Sundays and holidays and to sell everything from soaps to souvenirs.

Some of you, no doubt, believe that the present standard of education is now in excess of the needs of the pharmacist; that he is forced to acquire educational qualifications for which in the practical world of business he has no need, and which are soon forgotten, anyway. I heard one man suggest—not seriously I think—that we disband our college and repeal the Pharmacy Act, saying that it was no good because it gave the druggist no protection.

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\* Toronto A. Ph. A. meeting.

Let me inject right here—Pharmacy laws, like all other laws, are enacted for the protection of the public, and not for any selective group. Of course, we must have some protection, too, but laws are primarily for the entire people.

So with your indulgence, I am going to give you briefly my conception, at least, of the reasons for the high and yet higher standards of educational training that should be required of the men entering upon the profession of Pharmacy.

Let us for a moment examine the changes that have been effected in the status of Pharmacy during the past few decades. Let us see who or what is responsible for those changes, and then let us see if we can anticipate the future, the dawning of which may be brighter and perhaps nearer than we think.

If you will look back a generation or two ago, you will recall that there were no pharmacy acts in effect in your state or province. Our Ontario act was framed in 1871.

The chemist of that day was a man who had served years of apprenticeship with a preceptor who saw to it that he was thoroughly trained in all of the then known arts of pharmacy. He made his own pills, extracts, ointments and so forth, and he did it well. The chemist was a manufacturer as well as a dispenser. He was a man of integrity and dignity whose advice was eagerly sought. He was one of the "wise" men of his community.

We are prone to recall that era as "The Good Old Days." Well, they probably were good old days, but as far as I can recall, the chemist in my boyhood days was as happy and contented with his station in life as we are to-day—no more—no less. There was always the same feeling that they were slaves to an unappreciative public. It is certain that working conditions were much longer and less remunerative.

Toward the beginning of this century, Science, in all her branches, seemed to undergo an awakening. Rapid strides in advancement were made in all the arts; and medicine and pharmacy were not any exceptions.

While the chemist of his day knew all the details connected with the making of extracts, tinctures, etc., of definite strength in relation to the crude drug, he had not yet learned how to determine the potency or therapeutic activity of his product. Biological standardization and assay were new to him. He had neither the training nor equipment to keep pace with the progress of the Science. Then came into prominence the manufacturing pharmaceutical houses, with their extensive laboratories and their highly trained chemists.

Then came also into the field the use of serums, vaccines, glandular products, etc., and the old time chemist found himself away behind in the procession; indeed he lacked the educational training to keep up with it. No longer could he dispense such preparations as those of Ergot, Digitalis or Nux Vomica unless they were of unquestioned potency. He ceased to be a manufacturer. He became simply a vendor.

Finding himself forced to face a higher standard of living, with a reduced revenue from his dwindling business, he did what he was forced to do, much as he may have disliked it; he became a merchandizer.

One line after another was added until to-day we are accused in some quarters of being simply a commercial class. And yet through it all we have maintained our professional traditions, we have raised our educational standards, both for entry into and graduation from our colleges.

Again I fancy I hear some of you say "Yes, but what's the use?" This brings us to our real problem "Whither are we going?" The inevitable law of evolution has been operating in the realm of Pharmacy just as surely as it has in every other phase of existence. It is only a few years ago when the entry into our profession was not very difficult—the matriculation standard was not high, our College course was not advanced, the men who emerged with diplomas under their arms were not possessed with the educational equipment of the graduates of to-day. If you are in any doubt about this statement, just have a look through the notes of some of your recent graduates. You will probably decide at once to take a post-graduate course so that you will know as much as your clerk. The graduate of to-day has no reason to suffer from an inferiority complex when thrown into the society of men of other professional callings.

Gentlemen, these are the men with whom the destiny of Pharmacy rests. The future of the profession is still in a state of evolution, it is in the melting-pot—the commercial and the professional—and the ultimate product that comes out of that melting-pot is going to be deter-

mined by the material that is put into it, and that material is represented by the men who are entering upon the profession to-day.

Are these men, after receiving intensive training in the sciences of Chemistry, Biology, Pharmacognosy, etc., are they, after three or four years of university training, going to be satisfied to go back to the so-called "modern" drug store to sell chocolate bars and alarm clocks? I think not.

I believe, sir, that we are soon to reach a parting of the ways. I believe that the Professional Pharmacy *must* survive—the commercial *may*.

We see signs in the horizon now. We are preparing ourselves now for the advent of "State Health Insurance." It is past due. I can visualize the time when the whole practice of both medicine and pharmacy will be under state control, just as our public school educational system is to-day.

When that day comes, we must be able to prove that Pharmacy is an ethical institution, and that we are the logical ones to be entrusted with the business of Pharmacy. Having in mind the fact that physicians in all the provinces and states may legally dispense, is it very remote to anticipate them attempting to take over the business of dispensing?

I do not for a moment believe that the outstanding members of the medical profession would wish this—but we should be prepared to establish the fact that ours is the profession, fitted by education and training, to take over the responsibilities of these duties.

I cannot visualize (under State control) the dispensing of medicines being handed over to stores cluttered up with 10 cent store merchandise, where price appeal is their only asset. I cannot conceive (under such control) the practise of Pharmacy being entrusted to any other than ethical and educated pharmacists.

Let us pay more attention to the educational aspects of our profession. Let us raise the standard to a still higher plane, not for the sake of keeping down the number of entrants, but to make it more selective and cultural. Let us put into this melting-pot young men of unquestioned character and ambition, make it necessary for them to acquire advanced, scientific training with respect to all branches of our profession, and you may rest assured with me that out of this crucible will evolve the type of pharmacist that will faithfully and truly maintain the best traditions of the noble art of Pharmacy.

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## PHARMACEUTICAL RESEARCH AND THE RESEARCH CONFERENCE.\*

BY H. V. ARNY, PH.D.

It is just ten years since the National Conference on Pharmaceutical Research was organized at Cleveland, Ohio, and it is therefore appropriate that the founder of the Conference should speak at this time on "Ten Years of the Research Conference."

While this is the title assigned to me on the official program, with my full approval, I take the privilege of broadening my subject by using the title printed above. While the recital of what has occurred in this organization during the past ten years is of much interest to those present at this meeting, of far greater importance is the endeavor to let a wider audience know the debt that the world owes to pharmaceutical research.

This brings me to the query: "What is pharmaceutical research?" My answer is a broad one—research in all of its phases devoted to study of healing agents. Pharmaceutical research in this sense covers the ages since man began to walk the earth, as a thinking being. Its research workers include the priests of the Egyptian temples of the Eighteenth Dynasty, investigators whose findings have come down to us in medical papyri of B.C. 1700 and B.C. 1552; Greek physicians such as Dioscorides and Galen (First and Second Centuries, A.D.), the Roman medical writers such as Celsus (First Century, A.D.), the Persians or Arabians, such as Rhazes and Avicenna (Ninth and Tenth Centuries, A.D.), medieval herbalists such as St. Hildegard (1098–1179); the Jew, Maimonides (1135–1204), that medical fire-brand, Paracelsus (1493–1541) and lastly the pharmacopœia makers headed by Valerius Cordus (1515–1544). By the time of Cordus pharmacy as we now know it had become a well-established branch of medical practice and while the pharmacists from 1140 to the Eighteenth Century were interested chiefly in preparing

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\* Read at the 1932 meeting of the National Conference on Pharmaceutical Research.