

INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH
 PROCEEDINGS OF TWENTY-SEVENTH GENERAL MEETING

DRAKE HOTEL, CHICAGO, ILL.

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I. Inaugural address, <i>J. Roy Blayney (University of Chicago)</i> - - - - -	627
II. Index of participants and sequence numerals for corresponding abstracts - - - - -	632
III. First Session, Afternoon, June 24; abstracts 1-13 - - - - -	633
IV. Second Session, Evening, June 24; abstracts 14-22 - - - - -	637
V. Third Session, Morning, June 25; abstracts 23-31 - - - - -	640
VI. Fourth Session, Afternoon, June 25; abstracts 32-43 - - - - -	644
VII. Fifth Session, Evening, June 25; abstracts 44-55 - - - - -	648
VIII. Sixth Session, Morning, June 26; abstracts 56-67 - - - - -	653
IX. Seventh Session, Afternoon, June 26; abstracts 68-77 - - - - -	658
X. Materials Group, June 25-26; abstracts 78-93 - - - - -	662
XI. Papers read by title, abstracts 94-131 - - - - -	666
XII. Executive proceedings and register of newly elected officers and members - - - - -	679

I. INAUGURAL ADDRESS: DENTAL EDUCATION AND THE
 INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH

J. R. Blayney, Chicago, Ill.

It appears to have become the custom for the incoming President to discuss some topic of general interest. One year ago the Secretary called to my attention the fact that I would be expected to present such a discussion at this time. I was told it was customary to speak regarding one's own investigations or some topic of historical interest. In reviewing the titles of the addresses given by my predecessors I have found that they extend from a critical analysis of research or problems of dental educational to that interesting and entertaining presentation of "Operations Crossroads." Being neither an atomic scientist nor dean of a progressive dental school I cannot hope to present for your consideration the devastating effects of modern warfare or a model curriculum for undergraduate dental education.

Before entering upon my discussion I should like to gratefully acknowledge and to express my appreciation for the high honor you have given me. I accept this office with a realization of the many responsibilities involved because I firmly believe that men of your character and interest will wholeheartedly assist in advancing the activities and success of the association. Without this cooperation my efforts will have little value.

While reflecting upon the various topics which would be appropriate to discuss at this time it occurred to me that it should be of interest to pause for a few moments to consider what progress our association has made and what has been its influence on dental education. I will speak briefly on the topic: "DENTAL EDUCATION AND THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH."

*The meetings of the International Association for Dental Research preceded the meetings of the American Association of Dental Schools on June 27, 28 and 29.

The Editor prepared these Proceedings with the close cooperation of the General Secretary, Dr. Edward H. Hatton.

We have celebrated the one hundredth anniversary of the founding of the first dental school. Much has been accomplished during the first century of dental education. A great deal more remains to be achieved. From a humble beginning, but under the guidance of sincere and far-seeing leaders, dentistry has advanced from the level of a craft to that of a full rank in the healing arts professions.

Five very important milestones stand out when we review the history of dental education. They are:

1. The organization of the *Journal of Dental Research* in 1919.
2. The organization of the INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH in 1920.
3. The study of dental education by the Dental Educational Council with the report prepared by Dr. Gies entitled "Dental Education in the United States and Canada in 1921 to 1926."
4. The report of the Curriculum Survey Committee of the American Association of Dental Schools in 1935.
5. The formation of the Council on Dental Education by the American Dental Association in 1937 and its study of the dental schools from 1942 to 1945.

Of course other achievements of merit can be mentioned but from our present vantage point those cited stand out in bold relief. For our purpose today I believe we can consider item one, the organization of the *Journal of Dental Research*, and item two, the organization of our ASSOCIATION as being one and the same as they are so closely knit and related.

The INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH was founded in 1920 with twenty-five charter members in New York City, fourteen in Boston, and one in Chicago. By the end of 1920 there was a nucleus of three sections with fifty-three members since by that time the Chicago group numbered fourteen. The objectives as announced were to advance research in all branches of dental science, to encourage and facilitate cooperative efforts and achievements among investigators so as to promote dentistry for a more perfect service to humanity. From 1920 through 1927 three more sections were established, namely, Toronto in 1921 with a membership of fourteen, Ann Arbor in 1923 with five, and San Francisco in 1924 with seven members. Also seven memberships were issued to those living in areas where a local group was not active. During those eight years, twelve memberships were lost either through death or resignation. As of January 1, 1928, the ASSOCIATION had a total membership of seventy-four. During this year (1928) seventy-three memberships were issued with sections appearing in several centers. Without taking time to trace the growth year by year the ASSOCIATION attained a membership of five hundred and nineteen in twenty-six North American sections and with ninety-one members in seven sections in foreign lands at the close of 1948. While we may point with pride at this excellent record of growth in physical stature there are other criteria which are much more indicative.

The report published in 1926 by Dr. Gies in the *Bulletin on Dental Education in the United States and Canada* reveals that research in dental educational institutions was at a very low ebb. Of the forty-six institutions studied by the committee we find that only nine schools indicated that they had what was called a research program. The budgets varied from a low of \$50.00 to a high of \$15,073.00 with a median of \$1,773.00 for the academic year 1920-1921. During the year 1923-1924 fourteen schools had research programs with budgets running from \$71.00 to \$34,821.00 with a median of \$2,000.00. It is difficult to draw a

definite comparison with the findings of the Council on Dental Education's study of 1942-1943, inasmuch as the item on research in the latest study did not request such budgetary figures, or a statement of the programs in progress. However, all of the thirty-eight schools studied by the Council indicated that they did have a research program. Probably the least of these would fully equal the median program of 1920-1924. It is of course well recognized that many of our institutions had research programs which the Council considered as very effective from the standpoint of physical facilities, allocation of funds, and the results obtained.

It is entirely fitting that we ask ourselves the questions: What is the place of a research program in a dental school? Does the responsibility of a dental school go beyond that of training a student to practice his profession? It is well accepted that the objective of higher education is not limited to the dissemination of factual material. The objective includes inquiry into the vast and unexplored areas of knowledge. Teaching and research in our professional schools go hand in hand. President Stoddard has said, "The aim of higher education is not to turn out 'educated' men and women emerging bright and shiny like so many insects from a four-year cocoon. The aim is rather to give students a living fund of knowledge from which they may generate ideas. The aim is to encourage straight thinking."

Research is an orderly planned and executed endeavor to explore the unknown and to extend the breadth of knowledge. Without such a program stagnation exists and teaching becomes stifled. Education at the university level is more than the dissemination of knowledge. The search for new truths is just as important. Without the stimulating influence of research professional education becomes hollow and soon adopts empirical methods. Before 1920 research in dentistry was chiefly directed towards the development of new appliances or new technical procedures primarily directed toward the repair of dental defects. A major portion of this was under the direction of commercial concerns.

Probably because of this technical approach rather than the study of biological principles underlying the etiology of oral disease, dental education at this period stressed reparative methods in lieu of prevention. Departments within an institution which foster an active investigative program exhibit the most enthusiastic and effective teaching. This type of teaching will stimulate the students of the higher level to develop the spirit of enquiry and thereby do much to encourage them to seek an understanding of the scientific principles which will unlock the door to prevention as well as a more rational method of therapy. A dental curriculum which does not include an active investigative program fails to provide the proper stimulus to the faculty for more effective teaching and to the student body for the development of enquiry regarding the conditions with which they will be confronted.

In the President's address of 1928, Dr. Miner pointed out that three groups were primarily concerned in the problem of dental research, namely the investigators, the administrators, and the donors. It has been the general belief that research on dental or oral problems was lagging because of the almost total absence of financial support. Little attention was given to the thought that dental education had failed to impress either the administrators of the university graduate and research programs or the general public that there was a crying need for investigation concerning oral disease. Also it was considered that dental education itself was not striving to create a spirit of enquiry among the more promising students. With this apparent lack of interest on the part of dental education it is not surprising that funds were not forthcoming to promote basic scientific investigation regarding oral disease.

With the establishment of the INTERNATIONAL ASSOCIATION OF DENTAL RESEARCH the first step was taken on the part of dentistry to put its own house in order. When the stronger schools within universities began to demonstrate the ability of some of their faculty members to conduct research, university funds for the promotion of research gradually became available. As those studies contributed to a better understanding of the problems of oral disease more and more funds were forthcoming both through university budgets and from private sources. It is true that dental disease is not dramatic when compared with cancer or poliomyelitis; however, private funds can be obtained when the public understands the need. Mr. Walter G. Zoller was one of dentistry's greatest benefactors. It was a practicing physician who was intensely interested in the role which oral conditions play in systemic disease who first interested Mr. Zoller in dentistry. During a recent visit to the Zoller Clinic, Mr. Goldblatt, who has given so much money and now is devoting all of his time to the raising of funds for cancer research asked me, "Are you telling the public what you are doing? If you will tell them the need as you have told me I can get you all the money you will use. It is easy to get money but you must first tell the public."

I am convinced that Mr. Goldblatt is right. When we have developed the personnel capable of conducting scientific investigations yielding results which are comparable and as significant as research in other areas of science, we will enjoy an equal distribution of financial aid.

In the report of the President's Scientific Research Board on "The Nation's Medical Research" mention was made of the acute shortage of adequately trained personnel for dental research. Dr. H. Trendley Dean has indicated that only one-half of the existing dental schools have made application for financial assistance for investigation from the National Institute of Health Grant-in-Aids. The principal reason for this is the shortage of personnel.

In order that our more recent members may better understand the role that the INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH has played in the development of research in the dental schools, I should like to refer briefly to the early days of the ASSOCIATION. The first annual meeting was held in New York City on December 21, 1922. Two papers were presented at that time; one by C. F. Bodecker on "The Dento-Enamel Circulation" and one by Dr. J. Leon Williams on "Permeability of Enamel." The second meeting was held in Chicago on March 7, 1924. Four presentations are recorded for that session. One consisted of a presentation of old and rare prints and etchings depicting the history of dental practice, two were concerned with histology and pathology of oral structures, and one discussed the presence of fusiform bacilli and spirochetes in alveolar abscesses. The third annual meeting occurred on March 20, 1925, in Chicago at which five reports were made. The fifth meeting was held in New York City on April 19, 1927, with four presentations. No mention was made of the number in attendance at these meetings. The sixth annual meeting was held in Washington, D. C. on March 25, 26, 27, and 28, 1928. The total enrollment as of March 15, 1928, was eighty-one members. While this meeting was distributed over four days, in reality it consisted of five sessions. These sessions were so arranged so as not to interfere with the fifth annual meeting of the American Association of Dental Schools. During these five sessions forty-seven reports were presented. It was during this annual meeting that the seventy-three new names were added to the official roster. The total registration of the meeting was forty-seven. In reviewing the reports which were presented for discussion we find only a limited number which today could be considered as research reports. Many would have to be classed as case reports or opinions of the authors which were not substantiated by convincing data.

This is in striking contrast with the twenty-sixth annual meeting held in Rochester, New York, on June 18, 19, and 20, 1948. At this meeting there were five sessions and on two occasions the session was divided into two sections. The attendance of members was one hundred thirty-eight with an addition of one hundred thirty-two guests. One hundred and four reports were presented and discussed while an additional fifty-nine reports were read by title. A large percentage of these one hundred sixty-three research reports were based upon well-organized and carefully conducted experimental study.

Dr. Hatton has made a comparison of the areas covered by the research reports presented in the 1928 and 1929 meetings with those presented at the 1948 meeting. (Table I.) These show a very interesting and, I believe, significant trend.

TABLE I

SUBJECT AREA	1928-1929 (%)	1948 (%)
Anatomical	17.5	2.5
Bacteriology and parasitology	15.0	5.0
Chemistry and pharmacology	5.7	13.5
Clinical research	13.5	6.8
Clinical research in caries prevention	0.0	5.0
Growth and development	0.0	9.5
Histology and embryology	14.5	4.3
Metallurgy, etc., general program	1.0	1.3
Metallurgy, etc., dental materials group	0.0	14.5
Non-research	11.7	5.0
Nutrition and diet	9.0	8.5
Pathology, tumors, pathology of dental caries	4.7	17.5
Physiology	4.7	4.3
Physics and physical chemistry	0.0	3.0

The motivation for the spirit of enquiry in our dental educational institutions so admirably initiated by the founders of the INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH and advanced by the enthusiastic support of the entire membership has done much to elevate the standing of dental education to the level of a university discipline. That much remains to be accomplished regarding the development of research programs in our dental schools is borne out by the fact that only eighteen of the dental schools in the United States supplied items to the 1948 program. Only in very recent years have our educational institutions begun to consider the preventive phase of dental practice. It is evident that dental education must place major emphasis upon the study of the child. These achievements will be accomplished through intensive and carefully planned investigation.

In the past twenty-nine years our ASSOCIATION has contributed magnificently to the general welfare of the public. We have assisted materially in the development of dental education to the position which it now enjoys. The stimulation of the spirit of enquiry has always been encouraged and will be continued at an ever increasing tempo. This has been a very important factor in the organization and development of what is truly a graduate study. The INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH has made significant contribution to the advancement of dentistry. For this we may be justly proud.

The record reveals that the ASSOCIATION has lived up to the announced objective to advance research in all branches of dental science, to encourage and facilitate cooperative efforts and achievements among investigators so as to promote dentistry for a more perfect service to humanity.