IADR President-elect's Speech

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President Löe, President Mandel, Distinguished Guests, Ladies and Gentlemen:

As many of you know, the IADR celebrated its 60th anniversary last December. In those 60 years its growth has been phenomenal. Thus, the membership of the Association has swelled to over 5,500 from a modest 40 in 1920. Where the membership once came from the North American Continent only, today it represents 54 countries. Thirty-one of these countries make up the 11 Divisions that are the principal organizational units of the Association. The annual meeting that we open today features 1,383 papers. In 1951, when I presented my first IADR paper, 113 papers were presented. The combined total of papers for the first five meetings was 24. Of the first four meetings, by the way, Chicago hosted three; so it is indeed fitting that we celebrate this anniversary in the Windy City.

Growth of the Association is also evident when one considers the breadth and depth of the scientific branches and professional fields that we fit under our umbrella today. This diversification has contributed to the increase in membership and meeting activities. The inclusion of these many broad fields of interest under dental research was undoubtedly related to the patterns of research funding that the United States Government established during the 1950's and 1960's. It led ultimately to the formation of groups which today play an important role in the activities of the Association. As an example, the National Institutes of Health (NIH) assigned responsibility for much research involving mineralized tissues to the National Institute of Dental Research (NIDR), which therefore stimulated a great deal of research in this area. For years the annual meeting of the IADR was *the* meeting for anyone interested in mineralized tissue research, although a Mineralized Tissue Group was not formed until much later. The establishment of a Craniofacial Biology and a Neuroscience Group also appears to be a direct consequence of an influx of new members, and a response to these areas having been selected for support by the NIDR. It is noteworthy, too, that while the first group, the Dental Materials Group, was established in 1939, the second group was not set up until 1965, at a time when funding for dental research in this country had almost reached its highest level. Today, 16 years later, the groups number 13, and a 14th may be added before the end of this meeting. In setting up the groups, the IADR has in a way separated activities that are inter-related. Whether or not this is desirable in the long run still remains an open question. It is likely, however, that the extra communications link which the groups provide for their members solidifies rather than weakens the Association.

Diversity does not reside only in our international make-up and mixture of scientific branches and professional fields. Another kind of diversity, represented by a multitude of basic and applied science disciplines, divides the individual groups into smaller interest units, but also forms the common base for all of them. The expansion of dental research outside its own special field must have been in the minds of the founding fathers when they phrased the objectives of the new Association, and I quote: "The Association has been established to promote broadly the advancement of research in all branches of dental science and in those phases of the related sciences which contribute directly to the development of oral health, and which add to the knowledge of the mouth and teeth and of their relation to the body as a whole." Paul Kitchin, the 14th President of the IADR, expressed the same idea in much more direct terms when he said in his 1937 presidential address: "This Association is an organization devoted to the purpose of attacking the problems of dentistry with the weapons provided by the fundamental sciences."

Perusal of past annual meeting programs shows clearly that dental research did indeed develop with strong emphasis on basic research. This development probably took place with more strength in the United

States than in other countries. A great deal of the credit for accelerating this process should go to Robert C. Likins who, as head of the NIDR Extramural Programs, worked ceaselessly to interest dental and basic scientists in each other's efforts. Bob Likins died unexpectedly ten days ago, but his contribution to the advancement of dental research will always be an important part of our history.

Kitchin's way of stating the objectives of the Association raises a question that needs to be considered in these days of shrinking support for research. Let me repeat: "This Association is an organization devoted to the purpose of attacking the problems of dentistry with the weapons provided by the fundamental sciences." The important and obvious question is: Does dental research need to be involved in the making of such weapons? Should we not leave that job to others and use our limited funds to support our own special field? My answer to that, probably to nobody's surprise, is a resounding NO. It is from basic science supported by dental research funds that we have derived critical insights into the mechanisms by which bacteria adhere to each other and to specific tissues, including tooth tissues, and into the possible role of the immune system in chronic infections, such as periodontal disease. Many years of basic research on collagen have now led to the identification and characterization of other extracellular substances which play important roles in numerous biological processes. Further developments in this area may one day make it possible for us to attach specific cells to tooth and artificial surfaces and induce formation and/or repair of tissues damaged by disease. Further, it is the basic scientist who will teach us new approaches to pain control, bring us new and better dental materials, and introduce new approaches to prevention and therapy—to mention a few areas. An especially important product of basic research is the development of sophisticated new technologies which in turn bring about new advances when put to use. An example of this is the recently-developed hybridoma technique, which makes it possible to produce large quantities of monoclonal antibodies—an advance of potential significance in terms of both research and therapy.

I may be overly optimistic. Yet, I have a distinct feeling that we are rushing past milestones toward another one of the scientific revolutions in dentistry about which Harald Löe spoke two years ago. To get there, however, dental researchers must continue to participate in, support, and understand basic research. If not, the weapons and tools that are developed may not be appropriate for our special needs. Further, and equally serious, the scientists who may be able to modify the weapons and apply the new tools are likely to turn their backs on us. I do not discount the importance of and need for more applied research; but, if we are to succeed, we need scientists who are capable of participating in the full spectrum of research from the very fundamental to the most applied.

Clearly, a number of countries have not experienced the same degree of diversification of dental research as has this country. In many countries the most pressing concerns are not research, but treatment and prevention. In still other countries which have been active in dental research, the more basic research programs appear to be the first victims of declining government support. This becomes particularly critical where the dental researcher performs in isolation from other biomedical and basic research groups.

The campaign for research funding is unquestionably the responsibility of each division, section, or national dental society. The IADR, however, through the activities of the Committee on Health Promotion and the International Relations Committee, may help draw attention to the potential benefits and accomplishments of dental research and in that way affect public attitudes. The annual meeting of the IADR serves a similar purpose by highlighting dental research activities both internationally and in the host country.

Nevertheless, one can assume that substantial national differences will remain in dental research activity. It seems to me that the IADR could serve an important function as a mediator of research information among dental scientists in different parts of the world. Our annual meetings here, and in the other Divisions, do indeed provide an opportunity for communication of research findings and an exchange of new ideas. They do not, however, leave any useful record of these activities, so that only those who

attend and their associates may benefit. In addition, a number of our specialists—basic scientists as well as clinical researchers—do not attend the annual meetings, preferring to spend their limited travel funds on meetings of their peer groups.

The **Journal of Dental Research** provides the Association another means of communication. While subscription is not universal among our members, the **Journal** probably has the largest number of subscribers and widest distribution of any dental research journal. Yet it does not, in its current format, provide a sufficiently broad representation of dental research to serve the purpose as a general information broker. The main reason for that is probably that many of our scientists prefer to publish their papers in other journals. It is unrealistic to think that that trend will change in the immediate future, if at all. Rather, the Association needs to develop entirely new avenues of communication with dental researchers around the world. Although no specific proposals will be presented here on how to accomplish that, one possible approach is worth mentioning since it was part of the original plan for the **Journal**, and I quote from William J. Gies' introductory remarks to the first issue of the **Journal of Dental Research**: "Effective reviews of important developments in research, written by those most competent to do so, and summarizing clearly and reliably the knowledge of practical subjects, will be published from time to time." I am happy to announce that the **Journal of Dental Research** indeed has plans to follow this recommendation in the near future.

During the years of rapid growth, the IADR has successfully accepted and adapted to the demands of an ever-increasing diverse membership. However, as it enters its sixty-first year, it faces a number of critical challenges. Support for research is decreasing; support for educational institutions and for training is declining; the cost of doing business, *any* business, is escalating rapidly. The rising cost of travel, especially, will make it even more important to develop effective means of communication among members in different parts of the world. Undoubtedly, priorities will have to be developed, and some activities may have to be deferred. Yet, I am convinced we will continue to go forward, primarily because of the quality and dedication of the members of this Association. I am therefore particularly honored to have been elected to serve as your president and promise to do my utmost to warrant your trust.

Thank you.