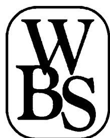

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Preface

Minority oral health

Racquel Z. LeGeros, PhD

Norman S. Braveman, PhD

The editors of *The Dental Clinics of North America* invited us to prepare a special issue on the topic of "minority oral health." We accepted this invitation as an opportunity to share some of the clinically relevant findings of the four Regional Research Centers on Minority Oral Health (RRCMOH) in the United States that are funded by the National Institute of Dental and Craniofacial Research (NIDCR) of the National Institutes of Health (NIH), and to celebrate the outstanding accomplishments of these unique centers. The articles in this special issue do not represent the total research—clinically relevant or otherwise—conducted at the centers. Each center represents a rich interplay of basic and clinical studies focused on documenting and gaining an understanding of the factors that contribute to disparities in oral health. In keeping with the interests of *The Dental Clinics of North America*, this issue focuses only on clinically relevant research and issues within the mission of the RRCMOH program.

To successfully chart a pathway to the future, we must know where we came from, where we are now, and how we got here. This thought seems particularly appropriate in that the research reported in this special issue of *The Dental Clinics of North America* is a guidepost to our future, based on our current understanding of minority oral health. Looking at these reports—the end products of the efforts of many individuals for almost a decade—it might not be readily apparent how we got here and where we came from; thus, it might be helpful to look at the historic backdrop for this research as a means of charting our way into the future.

Although the RRCMOH program became a reality only in 1995, the commitment of NIDCR to support research relevant to the lives of all citi-

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zens of the United States began well before that time. In the early 1980s, realizing that in order to encourage research involving underrepresented racial and ethnic minorities it was important to have a racially and ethnically diverse scientific workforce, the NIDCR announced that it would provide support for individuals from underrepresented ethnic and racial minority groups to engage in research on already-funded grants. It was thought that the supplemental support would provide these individuals with an opportunity to gain firsthand experience in research in the laboratories of individuals who had a proven record as scientists. As important, the supplement program would also serve as a first step in launching research careers of individuals who, under normal circumstances, would not find their way into research. In subsequent years, the supplement program became the model for similar programs in other institutes at the NIH, as well as the current and very active trans-NIH Minority Supplement Program.

This program was only a beginning, however. During the next several years a subcommittee of members of the National Advisory Dental Research Council (NADRC) was formed to monitor the development of additional programs aimed at increasing the amount of oral, dental, and craniofacial research on underrepresented populations, and to address the glaring problem of disparity in oral health. Under the leadership of Drs. Joe Henry, Jean Sinkford, Racquel LeGeros, and Ricardo Martinez, the subcommittee recommended to the NADRC that a research centers program initiative be launched. In February 1992, a request for applications was issued for developmental grants for minority oral health research centers. The developmental grants were viewed as the first phase of a two-phase process culminating in the funding of the RRCMOHs.

The RRCMOHs were collaborations between research-intensive dental schools (ie, schools that over the years had been successful in obtaining NIH support for their research) and minority or minority-serving dental schools (ie, schools whose student and faculty were at least 51% minority individuals or whose patient population was at least 51% minority individuals). To develop the alliances and organizational structures necessary to complete an RRCMOH, the NIDCR provided funding for 3 years, during which the collaborations were established and research projects planned. A major partner in all phases of this endeavor was the Research Centers in Minority Institutions (RCMI) program of the National Center for Research Resources.

The intent of the RRCMOH program, through the collaboration of research-intensive and minority or minority-serving institutions, was threefold: (1) to improve the oral, dental, and craniofacial health of United States racial and ethnic minorities through research; (2) to broaden the diversity of the scientific workforce by providing an environment in which individuals at all levels of experience and professional development could receive firsthand research experience with individuals that had a proven record in research; and (3) to develop and strengthen the oral health research infrastructure of minority and minority-serving dental schools.

Ten applicants were successful in obtaining support for development grants and, following the issuance of a second announcement in January 1994, four RRCMOHs were successful in peer review and received funding in September 1995. The following pairs of institutions formed the basis for the four centers: University of Medicine and Dentistry of New Jersey (UMDNJ)/University of Connecticut School of Dental Medicine (Northeastern Minority Oral Health Research Center); Meharry Medical College (MMC)/University of Alabama at Birmingham (UAB) (MMC/UAB Minority Oral Health Research Center); University of California at Los Angeles (UCLA)/Charles R. Drew University of Medicine and Science (UCLA/Drew Minority Oral Health Research Center); and New York University College of Dentistry (NYUCD)/The Forsyth Institute (Northeast Regional Center for Minority Oral Health).

Although the organizational structure, scientific programs, major aims, and approaches taken to accomplish the specific aims of each center were slightly different, they all shared a very important goal—to increase the understanding of oral, dental, and craniofacial health and disease in ethnic and racial minorities, which would lead to improving their oral health, and thereby their overall health.

At the Northeastern Minority Health Center (UMDNJ/University of Connecticut) the research focus was on prevention of dental caries in indigent children; characterization and evaluation of the prevalence and causes of dental caries, periodontal disease, and oral lesions in HIV-infected minority children and improvement of access to care in these individuals; examination of the causes of disparities in oral cancer between minority and majority populations; and barriers to participation in clinical research among African American populations. This center was very active in providing and developing biostatistical and epidemiologic expertise among the new researchers, as well as providing experience in research design, data management, and analysis of large clinical research projects for individuals who otherwise may not have become involved in research at any level.

Research supported through the UCLA/Drew Minority Oral Health Research Center built upon the diversity of the population found in the neighborhoods served by the Charles R. Drew University/Martin Luther King Hospital and associated clinics. Their aims were to focus on the relationship between oral and general health and create career development opportunities in research for faculty members. The research in this center focused on three core projects: one involving orofacial trauma, which included an examination of surgical approaches used in repair and the molecular events involved in healing and scaring, particularly in the formation of keloids; the second involving the development of measures needed to carry out comparative studies of oral health status in African Americans, Hispanic Americans, and whites; and the third involving the influence of cultural beliefs on utilization of oral health care services in minority individuals. This center was one of two that received additional funding from

the RCMI program of the National Center for Research Resources for faculty-development activities.

The aim of the MMC/UAB Minority Oral Health Research Center was to conduct research on connective tissues and oral microbiology. One study showed that African American women with periodontal disease have a twofold to threefold increase in the risk for premature birth. Using funds provided by the RCMI program of the National Center for Research Resources, this center also had a very active commitment to faculty development. Some of their developmental activities involved mentored experiences in research projects at both institutions, and conducting pilot research projects—designed to lead to competitive applications for NIH support—that involved oral health issues affecting African American children and adults.

The Northeast Regional Center for Minority Oral Health (NYUCD/Forsyth Institute) focused their research on the epidemiology of oral diseases (dental caries, periodontal disease, oral cancer) of several ethnic groups, the risk factors for periodontal disease, and the microbiology and chemistry associated with dental caries. Building on the ethnically and racially diverse populations of New York City, this center examined behavioral, cultural, and biological risk factors for these diseases and established active research laboratories at NYU to carry out state-of-the-science analyses of plaque, calculus, saliva, periodontal microbiota, and epithelial cells. This center also established relationships with various minority communities and initiated research collaboration with institutions such as the Memorial Sloan-Kettering Institute (on smoking-cessation studies) and the New York State Department of Health (on oral cancer). In addition, research training in this center was instrumental in launching the academic/research careers of several minority faculties.

The articles presented in this issue are a reflection of what has occurred since 1992 when the RRCMOH program was launched. They provide a glimpse at the path that has been taken to get to where we are now. The successes of the four RRCMOHs are a direct result of the day-to-day commitment on the part of the men and women who mentored newcomers to science, and are a reflection of the courage of those who made life-changing commitments to new career paths into research and science. These articles only hint at the importance of the RRCMOH program as a foundation for that part of the journey that has taken us to the development of a long-term and encompassing plan for research to reduce oral health disparities—a plan that is underscored by the Centers for Research to Reduce Oral Health Disparities and several other current NIDCR-sponsored initiatives.

In September 1999, the NIDCR, along with seven other federal agencies and offices, issued a request for applications for research that will lead to an understanding of the factors associated with health disparities among the people of our country. Integral in this research was the development, testing, and evaluation of interventions designed to reduce health disparities, with a particular interest in oral, dental, and craniofacial diseases and disorders. A

major hallmark of the initiative is national research and training networks fostered by collaborations across the health professions (eg, dentistry, medicine, nursing, pharmacy, behavioral and social sciences, and public health), both within and between institutions and between the health professions and social services directed at health promotion (eg, state and local health and health-financing agencies). Finally, the initiative is inclusive with respect to populations of interest in that it spans the racially, ethnically, and culturally diverse populations of our nation including populations of recent immigrants, individuals at all socioeconomic status levels—from both rural and urban settings, and individuals who are medically challenged or compromised. We entered new territory in November 2000, when 18 applications were received and, by September 2001, five centers received funding. None of this would have been possible without the successes of the RRCMOHs during the previous 9 years.

What will the future bring? An esteemed colleague is fond of saying that "the future is not simply today with tomorrow's date." This seems to be particularly true in this case. We have gone too far in oral health research, and biology in general, to not make major shifts in our thinking and research—changes that are as monumental now as they were with the inception of the RRMCOH initiative. With the explosion in our understanding of biomedicine and our ability to translate the knowledge of the human genome into the lives of people through proteomics and other approaches, if we are to be successful in gaining new understanding of, and solutions to, the health disparities that exist among our people, now—more than ever before—we will need individuals from varying fields and with diverse perspectives to join together and think creatively. It will be necessary to adapt our scientific approaches and take into account, through the creative use of informatics, new knowledge in biology and medicine that is being generated at an unprecedented rate. We will need to give more than lip service to the fact that the human being is a complex combination of interdependent nonlinear systems and, as such and in the spirit of chaos theory, will need to recognize that remote and very small perturbations in one part of the system can have very large downstream effects in another. We will need to understand that to gain a new and complete perspective of health and disease we must join biology, sociology, psychology, economics, and political science in unprecedented ways. We will need to start looking for the pathways that connect health or disease with public policy to finally understand why some people living in a given set of conditions are healthy and others are not. To be successful in all of this, we will need to continue to build on the foundation of the RRCMOH program.

Finally, we would like to acknowledge the tireless and sometimes frustrating work of the women and men who made these centers living entities. Some of their names appear on the articles in this volume, but many do not. Working together, they, along with staff of the NIDCR—particularly Ms. Lorrayne Jackson (the diversity program specialist at the NIDCR) and

Dr. Matthew Kinnard (currently the director of extramural associates program at the NIDCR)—have paved the way for the future—one that promises to move us to a nation of dental, oral, and craniofacial health for all.

Racquel Z. LeGeros, PhD
Department of Biomaterials and Biomimetics
New York University College of Dentistry
345 East 24th Street, New York, NY 10010, USA

Norman S. Braveman, PhD
National Institute for Dental and Craniofacial Research
National Institutes of Health, Building 31
Room 5855, 31 Center Drive, MSC 2190
Bethesda, MD 20892-2190, USA