

ORAL HISTOLOGY
and EMBRYOLOGY

BALINT J. ORBAN

ORAL HISTOLOGY *and* EMBRYOLOGY

Edited by

BALINT J. ORBAN

Loyola University, School of Dentistry, Chicago, Illinois

WITH 269 TEXT ILLUSTRATIONS

INCLUDING 4 COLOUR PLATES

FOURTH EDITION

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CONTRIBUTORS

Myron S. Aisenberg, D.D.S.

Baltimore College of Dental Surgery
University of Maryland
Baltimore

Alfred L. Ogilvie, D.D.S., M.S.

School of Dentistry
University of Washington
Seattle

Gerrit Bevelander, Ph.D.

College of Dentistry
New York University
New York

Balint J. Orban, M.D., D.D.S.

School of Dentistry
Loyola University
Chicago

Leroy R. Boling, Ph.D.

School of Dentistry
Washington University
St. Louis

Hamilton B. G. Robinson, D.D.S., M.S.

College of Dentistry
Ohio State University
Columbus

Samuel W. Chase, A.B., A.M., Ph.D.

School of Dentistry
Western Reserve University
Cleveland

Isaac Schour, D.D.S., M.S., Ph.D., D.Sc.

College of Dentistry
University of Illinois
Chicago

Harry E. Frisbie, D.D.S.

College of Dentistry
University of California
San Francisco

Harry Sicher, M.D., D.Sc.

School of Dentistry
Loyola University
Chicago

Donald A. Kerr, A.B., D.D.S., M.S.

School of Dentistry
University of Michigan
Ann Arbor

Reidar F. Sognnaes, D.M.D., Ph.D.

Harvard School of Dental Medicine
Boston

Paul C. Kitchin, B.S., M.Sc., D.D.S.

College of Dentistry
Ohio State University
Columbus

Joseph P. Weinmann, M.D.

College of Dentistry
University of Illinois
Chicago

Edgar B. Manley, M.Sc., B.D.S., F.D.S.R.C.S. (Eng.)

Department of Dental Pathology, Medical School
University of Birmingham
Birmingham, England

Frank M. Wentz, D.D.S., M.S., Ph.D.

School of Dentistry
Loyola University
Chicago

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School of Dentistry
Loyola University
Chicago

PREFACE TO FOURTH EDITION

The favorable reviews given the third edition of *Oral Histology and Embryology*, as well as the book's wide acceptance as a text in many dental schools, have brought both satisfaction and a continuing challenge to those of us responsible for authorship.

Several factors made this fourth edition difficult to compile. For one thing, dental research has entered another period of rapid progress and intensified controversy. Electron microscopy and histochemistry have already contributed much to our knowledge of dental structures, but in many respects we are still far from agreement in the interpretation of findings. As examples, we cite (1) the newest electron microscopic studies of the complicated, finer structures of the dentin, especially the so-called Neumann's sheath, and (2) the contributions made through histochemical research to our knowledge concerning the connective tissue ground substance and its possible significance with regard to dental structures.

Renewal of old controversies brings other problems. For example, there is the attempt of some investigators to deny the existence of an epithelial attachment to the tooth. The commonly accepted views on this structure are based on good evidence and are in accord with general biologic principles, but they have been questioned on the basis of experimental findings. The validity of these findings is questionable, however, since the experiments could not be repeated by other investigators with the same results.

The authors of a textbook of this type are faced with the problem of whether to include or omit such controversial issues which as yet have not been settled.

From the beginning, we have kept the didactic purpose of this book in mind and have simplified the presentation as much as we felt was possible without detracting from the value of the exposition. In presenting the admittedly complicated description of the early development of the human face, we came to the conclusion that, although improvements in this chapter are certainly possible, an omission of salient facts would make the description valueless as background for an understanding of abnormalities in this region. Here oversimplification would make the description meaningless.

Again, some changes in the list of contributors were necessary. Following the resignation of B. O. A. Thomas from the editorial staff, we are glad to announce the cooperation of Alfred Ogilvie and Frank M. Wentz. It is obvious to all of us that this book could never have been written without the efforts of all former contributors. These men are Joseph L. Bernier, Charles F. Bodecker, Paul E. Boyle, V. D. Cheyne,

Moses Diamond,† Bernhard Gottlieb,† E. Kotanyi, Emil Mueller, James Nucholls,† W. G. Skillen, B. O. A. Thomas, H. G. Worman, and H. A. Zander.

As in previous editions, it is not the purpose of this text to force any of the ideas herein expressed upon teachers in the field of oral histology and embryology. In the light of personal experience, each teacher will, as indeed he should, add to the text, subtract from it, or change the concepts. It is in this way that this textbook will remain a living thing.

BALINT J. ORBAN

Colorado Springs

†Deceased.

PREFACE TO FIRST EDITION

Oral histology and embryology have rapidly advanced during the last decade; an increase of detailed observations led to widely divergent interpretations. In writing this book it was the task of the contributors to sift the material, coordinate different opinions, and present a uniform and selected review of modern knowledge. It is hoped that the reader will realize that this presentation is in no way final but a basis for study and further investigation.

In compiling this text a new plan was adopted. The chapters were drafted by recognized authorities on the specific subject and each author's manuscript was submitted to all other contributors for discussion. Some did not write a chapter but aided the effort considerably by their remarks and criticism. It was the task of the editor to coordinate the different viewpoints which were presented. Thus the chapters had to be re-drafted several times according to the suggestions made by the collaborators.

While it is true that the co-workers cannot accept every detail presented in this book, the major differences in concept were successively eliminated. We pooled our resources, selected the best illustrations from our material, and we believe that the result presents a sincere effort in scientific cooperation.

We are greatly indebted to Mr. P. M. Orlopp, research assistant and photographer of the Foundation for Dental Research, Chicago College of Dental Surgery, for his excellent work in preparing the photographic prints, and to Mrs. P. Slatter for her untiring and efficient secretarial work.

We hope that this textbook will be of help, not only to undergraduate students, but also to those who work for graduate degrees, and to the practicing dentist. Every chapter contains remarks on the clinical application of the basic biologic principles.

We dedicate this book to those who recognize that clinical procedure is based on the knowledge of normal structure.

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