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Editor
Yojiro Kawamura, Osaka

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Foreword

Published since 1974, the Frontiers of ORL Physiology series was inaugurated
as a means of introducing and developing a newly emerging
concept concerning the physiology of the stomatognathic system. This
concept stresses the value of a systematic, physiological approach as a
means of achieving improved understanding of oral functions. As a
biological science, 'oral physiology' explores basic mechanisms
through the physiological study of the stomatognathic system of living
organisms, including humans. Studies in this field are designed to yield
information on the physiological role and functional interrelations of
all organs, tissues, and constituents of the oral-mandibular-facial
The stomatognathic system in humans and animals is characterized by highly specialized functions and morphology, which are further distinguished by the obvious phylogenetic and ontogenetic differences of oral-mandibular structures. Furthermore, the stomatognathic system participates in a variety of significant physiological functions, including chewing, biting, sucking, lapping, swallowing, salivation, and speaking. The proper functioning of these oral activities is ensured by a series of highly coordinated actions involving various parts of the stomatognathic system.

Given this complexity, an adequate overview of oral functions requires systematic understanding of oral physiology, which has been the goal of volumes published in the Frontiers of Orl Physiology series. The particular emphasis of the series is apparent in the individual titles: Physiology of Mstiction (1974), Physiology of Orl Tissues (1976), and Environment of the Teeth (1980).

Orl Sensory Mechanisms is unquestionably the most ambitious project in the series. When making initial plans nearly 3 years ago, the editor hoped to compile a comprehensive work covering oral sensory mechanisms. Such an ambition precedes actual developments, and physiological research in this field has not yet proved sufficient to explain the mechanisms of coordination and interrelations of various oral sensory functions which make possible the integration of the proper functions of the stomatognathic system. The lack of sufficient physiological research resulted in a more precise focus on oral sensory mechanisms showing close association with clinical problems in dentistry. Topics selected for coverage include general mechanical sensory functions of the stomatognathic structures, stereognosis, mandibular position sense, oral-facial pain, and taste. The resulting volume marks the first time that these topics have been consolidated in a monograph oriented towards dentistry.

I do hope that this volume will provide information on oral sensory mechanisms useful for dental students, oral biologists, and dental clinicians. As the editor, I would like to express my sincere appreciation to the authors of each chapter for their distinguished contributions. I also hope that this Frontiers of Orl Physiology series from Karger will contribute significantly to the worldwide development of research in oral physiology.

December 1982    Yojiro Kawamura, MD, DMSs