

**Zweiter Internationaler Kongreß  
für Histo- und Cytochemie**

**Second International Congress  
of Histo- and Cytochemistry**

**Deuxième Congrès International  
d'Histo chimie et de Cytochimie**

**Frankfurt/Main, 16.-21. August 1964**

**T. H. Schiebler**

**A. G. E. Pearse**

**H. H. Wolff**

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## Vorwort

Der II. Internationale Kongreß für Histo- und Cytochemie greift aus der Vielzahl der interessanten und bedeutungsvollen Einzelthemen der Histo- und Cytochemie diejenigen für Hauptreferate, Panel Diskussionen und Symposien heraus, die den gegenwärtigen Stand dieser Spezialwissenschaft in besonders eindringlicher Weise widerspiegeln und zukünftige Entwicklungen andeuten. Es soll versucht werden, bereits Erarbeitetes kritisch zu werten und auf neue Gebiete aufmerksam zu machen. Besonders liegt dem Kongreß daran, die der Histo- und Cytochemie eng benachbarten Arbeitsgebiete wie Biophysik und Mikrochemie ausreichend zu Wort kommen zu lassen. Neben mehr methodisch orientierten Themen werden einige angewandt-histochemischen Inhalts behandelt.

In Ergänzung zu den von der Kongreßleitung vorbereiteten Veranstaltungen finden 24 Parallelsitzungen statt, in denen die Teilnehmer des Kongresses ihre neuesten Ergebnisse in Form von Kurzvorträgen mitteilen. Hier zeigt sich die Entwicklung der Histochemie besonders deutlich. Viele der Freien Vorträge ergänzen die Hauptthemen des Kongresses. Insgesamt hoffen wir, den Kongreß als eine geschlossene Einheit vorstellen zu können.

Der vorliegende Band wurde darauf ausgerichtet, es den Kongreßteilnehmern während der Tagung und denjenigen, die nicht zum Kongreß kommen können, nachträglich zu ermöglichen, den Gang des Kongresses zu verfolgen. Alle Hauptreferate werden im vollen Wortlaut gedruckt. Von den Panel Diskussionen und den Symposien liegen Zusammenfassungen der einzelnen Beiträge vor. Die Kurzvorträge, von denen ebenfalls nur die Zusammenfassungen veröffentlicht werden, sind so gut als möglich geordnet. Auch hier soll der rote Faden des Kongresses in Erscheinung treten. Die Reihenfolge der Zusammenfassungen entspricht der Vortragsfolge während des Kongresses. Für den Inhalt der Vorträge und ihre Zusammenfassungen sind allein die Autoren verantwortlich.

Die Vollendung dieses Werkes zu Kongreßbeginn war nur durch die bereitwillige Mitarbeit aller Referenten, Moderatoren, Symposienleiter sowie aller Vortragenden möglich. Hierfür danken die Herausgeber auch an dieser Stelle. Dennoch wäre ohne die bis zum Äußersten entgegenkommende und sorgfältige Arbeit des Springer-Verlages dieses Buch nie termingerecht fertig geworden. Die Herausgeber möchten in besonderer Weise das große Verständnis von Herrn Dr. H. GOETZE, Mitinhaber des Springer-Verlages, die sorgfältige und äußerst prompte Arbeit von Fräulein H. SCHRÖDER vom Springer-Verlag bei der Herstellung, die Tätigkeit aller Helfer in der Druckerei und die Übersetzung der deutschen und französischen Texte ins Englische durch Fräulein R. LISKE, Cambridge/England, hervorheben.

Würzburg und London  
August 1964

T. H. SCHIEBLER  
A. G. E. PEARSE  
H. H. WOLFF

## Preface

In selecting the lectures, panel discussions and symposia of the Second International Congress of Histo- and Cytochemistry it has only been possible to select a few of the large number of interesting and important topics available. Those which have been chosen reflect most markedly the present situation of histochemistry and its future development. The aim of the Congress is to discuss known facts critically as well as to call attention to new topics. Other concerns of the Congress are subjects closely related to histo- and cytochemistry, such as biophysics and microchemistry. Together with the discussion of methodology attention will be given to applied histochemistry.

In addition to the sessions prepared by the Congress Committee, 24 parallel sessions will be held. During these sessions the members of the Congress will have the opportunity to present their latest results in a series of short communications. This part of the Congress will probably reflect most clearly the development of histochemistry. Many of the short communications supplement the main topics of the Congress. Thus we hope to reach certain uniform conclusions.

The aim of this volume is to help members of the Congress — and those who are unable to attend — to follow the course of the meetings. All principal lectures are published in full, whereas the contributions to the panel discussions and symposia are published in the form of summaries. The short communications — resumés of which are published — are classified as clearly as possible. The order of the summaries corresponds to the main thread of the lectures during the Congress. Responsibility for the content of each lecture and its summary lies with its authors.

The Editors are greatly indebted to all speakers, moderators, and leaders of symposia, whose ready collaboration has made the completion of this volume possible. However, the publication in time for the Congress would not have been possible without the immensely helpful and detailed assistance of the „Springer-Verlag“. The particular thanks of the Editors must be offered to: Dr. H. GÖTZE, joint proprietor of the „Springer-Verlag“, for his professional understanding and help, to Miss H. SCHRÖDER (“Springer-Verlag”) for her accurate and ready assistance, to all the employees of the printing house, and to Miss R. LISKE, Cambridge/England, for the translation of the German and French originals into English.

Würzburg and London  
August 1964

T. H. SCHIEBLER  
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## Avant-Propos

Le deuxième congrès d'histochimie et de cytochimie a choisi parmi les nombreux sujets intéressants et importants de ces deux disciplines, ceux qui, se prêtant à des exposés, à des discussions de la part des membres du jury et à des colloques, reflètent le mieux l'état actuel de cette branche de la science et en indiquent les développements ultérieurs. On essayera de mesurer à leur juste valeur les résultats acquis et d'attirer l'attention sur des domaines nouveaux. L'une des idées directrices de ce congrès est de laisser s'exprimer les représentants de disciplines très voisines de l'histochimie et de la cytochimie, comme la biophysique et la microchimie. Outre les sujets de pure méthode, seront traités quelques points d'histochimie appliquée.

En complément du programme organisé par la direction du congrès, auront lieu 24 séances parallèles, au cours desquelles les participants donneront connaissance, sous forme de courts exposés, de leurs derniers travaux, le but recherché étant de mettre clairement en évidence le développement de l'histochimie. Beaucoup de ces exposés complèteront ceux faits au cours des séances principales, et nous espérons que, dans l'ensemble, le congrès donnera une impression d'unité.

Le présent volume a donc pour objet de permettre de suivre le déroulement du congrès, pendant les séances, à ceux qui y participeront, a posteriori, à ceux qui n'auront pu s'y joindre. Tous les exposés faits au cours des séances principales seront donnés in extenso, les compte-rendus des discussions du jury et des colloques, sous forme de résumés, ainsi que les courts exposés, que l'on classera aussi logiquement que possible. Cette publication doit aussi mettre en évidence l'idée directrice du congrès. L'ordre dans lequel seront présentés les résumés sera celui observé au cours du congrès, les auteurs étant seuls responsables du fond et de la forme.

Cet ouvrage n'a pu être prêt à la date prévue pour le début du congrès que grâce à la collaboration de tous les rapporteurs, présidents de séance, directeurs de colloques et de tous les conférenciers. Qu'ils en soient remerciés ici! Toutefois, ce livre n'aurait pas été terminé à temps sans le travail soigneux et minutieux à l'extrême de la Springer-Verlag. Nous voudrions tout particulièrement témoigner notre reconnaissance à Monsieur H. GÖTZE, co-propriétaire de la maison d'édition, de la compréhension dont il a fait preuve à notre égard, à Mademoiselle H. SCHRÖDER, de la même maison, de son travail soigneux et rapide, à tous ceux qui nous ont aider à imprimer ce livre et à Mademoiselle R. LISKE, de Cambridge, de ses traductions en anglais des textes allemands et français.

Würzburg et London  
Août 1964

T. H. SCHIEBLER  
A. G. E. PEARSE  
H. H. WOLFF

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Montag, Monday, Lundi, 17. August 1964

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