Preface

Avoid overreactions” (principle of applied allergology)

Allergy is “in,” and has been for some years now. The term “allergy” is no longer a foreign word. In spite of this, allergies are still not adequately appreciated either by the general population or by the physicians’ community. On the one hand, allergy is like a “fashionable disease” and any disturbance of well-being is regarded as allergy; on the other hand, very severe allergic conditions remain neglected, being left undiagnosed and untreated. It is difficult to find the right balance between the extremes.

After the first two editions of this book (1982 and 1988) sold over 20,000 copies, the publisher and author decided to collaborate on a new and totally rewritten third edition. In this endeavor the original aim of a very brief and precise booklet containing relevant information for allergy practice was not forgotten. The book started as a collection of short information leaflets for residents rotating through the Allergy Division at Munich. It was Dr. J. Aumiller, chief editor of the Munich Medical Weekly, who then persuaded me to write a series of short chapters on allergy in practice, and I am still thankful for the brutality with which he forced me rigorously to shorten the text! In this third edition, which is published in both German and English, the author again had a fight to find the most logical method of classification, a difficulty for every complex medical field. There are different possible criteria which can be followed for a classification:

- According to organs (e.g., allergy of the nose, eye, skin)
- According to symptoms (e.g., urticaria, eczema, asthma)
- According to pathomechanisms (e.g., types according to Coombs and Gell)
- According to allergens (e.g., food allergy, animal protein allergy, nickel allergy)
- According to the clinical course and prognosis (e.g., acute or chronic allergies, life-threatening emergencies)
- According to genetic parameters (e.g., familial allergies, sporadic allergies)
- According to age (e.g., childhood allergies, adult allergies)
- and many more

If one pushed these classifications to their logical extent, many overlaps and repetitions would result. The living organism is not necessarily logical, and even less so in its pathophysiological variants.
Nevertheless, we need to stress the importance of a precise terminol-
ogy in the individual chapters; this is not a sophisticated philosophy but
rather reflects the inherent problems, which may be overlooked at a su-
perficial glance, but which are the daily bread and butter of serious aller-
gists.

Furthermore, it was important in the selection of references not only
– as is so often seen nowadays – to look through “three years of Medline”
but also to include important work from the past. Therefore, I politely
ask the reader – maybe like on a holiday trip – to trust the more or less ex-
perienced guidance of the author; this guided tour will be subjective, but
I promise to relate the most important points in a short and precise way.

Here I want to thank many people. Firstly my clinical and experimen-
tal teachers and mentors, Prof. Dr. med. Dr. h.c. mult. Otto Braun-Falco,
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the international allergy community. Dr. Eng Tan was my teacher as a
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Siegfried Borelli at the Department of Dermatology, Biederstein in Mu-
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which I was allowed to continue.

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and printing and to Dr. Thomas Platts-Mills from Charlottesville for the
kindness of his foreword!

Finally I want to thank my wife, Prof. Dr. med. Heidrun Behrendt,
head of the “Centre for Allergy and Environment” (“ZAUM – Zentrum Allergie und Umwelt”), for manifold support, beautiful electron microscope pictures and her everlasting contagious critical enthusiasm for allergy research!

Munich, am Biederstein
January 2005

Prof. Dr. med. Dr. phil. Johannes Ring
Foreword

Allergic disease has become a major aspect of Western Society, both in terms of medical management and quality of life. However understanding diagnosis and management becomes complex because not only are there multiple allergen sources involved but also a large number of diseases. Hay fever, perennial rhinitis, chronic sinus disease, urticara, atopic eczema, anaphylaxis, food allergy, and asthma each affect large numbers of patients. Because of the overall numbers (15%–20% of the population) there are inevitably a large proportion of patients who are allergic or think they are allergic and attribute other symptoms to this mechanism. One of the striking features of allergy is that each disease varies from very serious to trivial with no clear distinction. Thus for each of the major allergic diseases there are many individuals whose symptoms are not sufficient to go to a doctor and also patients whose lives are made miserable and even threatened by the diseases. Understanding the factors which contribute to such a spectrum of allergic disease is a major challenge.

As this book explains accurate diagnosis of sensitization is essential. Without this, it is not possible to make a realistic assessment of the role of allergy in the disease nor to plan treatment. For each disease there are multiple potenzial allergens involved and the management strategies are different. It is not surprising that assessment and management of allergic disease becomes confusing to many of the health care professionals who have to cope with this problem.

Professor Ring is well known internationally as an allergist and dermatologist who has contributed to research on allergy for at least 25 years (He is also famous for a wonderful sense of humor which sadly, but wisely, doesn’t come through in the book). He has now published a book which covers a wide range of diseases which are either allergic or immunological and which provides a comprehensive approach to management. In addition the book provides a complete reference to causes for each of the conditions associated with “Allergie”. Overall it is a useful and very helpful contribution to the literature of a still evolving problem.

Johannes has a very broad view of allergic disease but brings special expertise to several areas which are often ignored or glossed over. He has made major contributions to our knowledge of the role of allergens in atopic eczema. In addition he has a profound knowledge of other forms of skin disease. This adds depth and excellent judgment to the opinions expressed. He also includes a really useful chapter on pseudo-allergic
reactions. This is an important part of drug allergy and one to which he has often contributed. It is perhaps the awareness of other rashes, pseudo-allergic reactions and anaphylactoid reactions that adds the greatest strength to the book.

In the last few years Johannes and his colleagues have established the “Center for allergy and environment” (ZAUM – Zentrum Allergie und Umwelt) in Munich. This institute which is only five years old has already made its mark. Dr. Behrendt’s work on the interaction between air pollutants and allergen particles is well known but this group’s work on a group of leukotriene like molecules derived from pollen has opened up a new area of allergy research. All this adds further depth to Dr. Ring’s understanding which is clearly evident in the book. Certainly those chapters are a pleasure.

Not unexpectedly, Johannes Ring has written an excellent book which covers a wide range of allergic disease. The book provides a comprehensive but very well planned description of the diseases that are either very common or just common. His pragmatism comes through in all he writes resulting in a really useful guide to an increasingly complex field.

Thomas A.E. Platts-Mills, MD, PhD, FRCP
Oscar Swineford Jr Professor of Medicine
Division Head of Asthma and Allergic Disease
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Abbreviations

AC acetylcholine
ADCC antibody-dependent cell-mediated cytotoxicity
AE atopic eczema
ANCA antineutrophil cytoplasmic antibodies
APC antigen-presenting cells
APT atopy patch test
B B lymphocytes
BAL bronchoalveolar lavage
BAU biological activity unit
BDNF brain-derived neurotrophic factor
BHR bronchial hyperreactivity
BK-A basophil kallikrein of anaphylaxis
BRI building related illness
BSA bovine serum albumin
CAST cellular allergen stimulation test
CAT contact allergy time
CD cluster of differentiation
CGRP calcitonin gene-related peptide
COLAP colonoscopic allergen provocation
COPD chronic obstructive pulmonary disease, chronic bronchitis
CRF corticotropin releasing factor
CRIE crossed radioimmunoelectrophoresis
CRP C-reactive protein
DC dendritic cells
DNCB dinitrochlorobenzol
DNCG disodium cromoglycate
DTH delayed-type hypersensitivity
EAA exogen allergic alveolitis
EAC equivalent allergen concentration
ECP eosinophil-cationic protein
EEMM erythema exsudativum multiforme majus
EGF epidermal growth factor
EIA enzyme immunoassay (= PRIST)
EMS eosinophil-myalgia syndrome
ENU ethylnitrosourea
EOS eosinophil
EPX eosinophil protein X
ESR erythrocyte sedimentation rate
ETS  environmental tobacco smoke
FEV  forced expiratory volume
FEV1  forced expiratory volume in 1 s
G-6-PDH  glucose-6-phosphate dehydrogenase
GC  glucocorticosteroid
GMCSF  granulocyte-macrophage colony-stimulating factor
GPC  giant papillary conjunctivitis
GVH  graft-versus-host reaction
HAART  highly active antiretroviral therapy
HEP  histamine-equivalent potency
HETE  hydroxyeicosatetraenoic acid
HIT  heparin-induced thrombocytopenia
HLA  human leukocyte antigen
HSV  herpes simplex virus
IFN  interferon
IEI  idiopathic environmental intolerances
IGF  insulin-like growth factor
IL  interleukin
IPEC  intragastral provocation under endoscopic control
ITP  idiopathic thrombocytopenic purpura
LATS  long-acting thyroid-stimulating factor
LPR  late phase reaction
LTT  lymphocyte transformation test
MBP  major basic protein
MC  mast cell
MCDP  mast cell degranulating peptide
MCS  multiple chemical sensitivity
MED  minimal erythema dose
MHC  major histocompatibility complex
MIRR  multi-subunit immune recognition receptors
MPL  monophosphoryl lipid
MPO  myeloperoxidase
MPS  mononuclear phagocyte system
NAT  N-acetyltransferase
NCA  neutrophil chemotactic activity
NK  natural killer cells
NP  neurophysin
NSAID  non-steroidal anti-inflammatory drugs
ODTS  organic dust toxic syndrome
OPTI  oral provocation test for idiosyncrasy
PAF  platelet-activating factor
PBHRT  photobasophil histamine release test
PCA  passive cutaneous anaphylaxis
PEF  peak expiratory flow
PLA  platelet antigen
PMN  polymorphonuclear neutrophil
PRIST  paper disk radioimmunosorbent test
PRU  Phadebas-RAST unit
PUVA  psoralen ultraviolet A
RAST  radioallergosorbent test
RCM  radiographic contrast media
RIA  radioimmunoassay
ROAT repeated open application test
SBS  sick building syndrome
SJS  Stevens-Johnson syndrome
SOD  superoxide dismutase
SRS-A slow-reacting substance of anaphylaxis
SSSS staphylococcal scalded skin syndrome
STAI state trait anxiety inventory
T  T-lymphocyte
TCR  T-cell receptor
TEN  toxic epidermal necrolysis
TENS transepidermal nerve stimulation
TGF transforming growth factor
TRUE thin layer rapid use epicutaneous (test)
TNF tumor necrosis factor
UV  ultraviolet
VIP  vasoactive intestinal peptide
VOC volatile organic compounds