

An unified Immunology curriculum for Europe – from the UEMS Board of Medical Biopathology

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Evolution of Immunology as a distinct medical specialty – initial crisis of identity

- Immunological mechanisms pivotal in disease causation in many medical specialties
- Initial difficulties in defining the specialty largely due to Immunology being seen as a mechanism driven discipline or pathogenetically based subspecialty without a procedure or significant patient base that the specialty could claim as its own.
- *Thompson RA. Clinical Immunology: is it clinical science or medical practice? Clin Exp Immunol 1993;93:299-300*
- *Waldmann TA. 1988 Presidential Address of the Clinical Immunology Society: Clinical Immunology is Everywhere and Nowhere - strength or weakness? Clinical Immunol Immunopath 1989;51:2-12*

Evolution of Immunology as a distinct specialty - II

- Specialty emerged in the 1970s predominantly as laboratory-based immunology or immunopathology.
- Growing acceptance of the immune system as a specific lymphoid organ system with an anatomy and physiology as complex as any other organ system in the body.
- Increasing awareness/recognition of immunodeficiencies, immunotherapy and allergic diseases provided impetus for the development of a *combined clinical + laboratory* approach to Immunology.
- This approach is endorsed by the WHO and IUIS

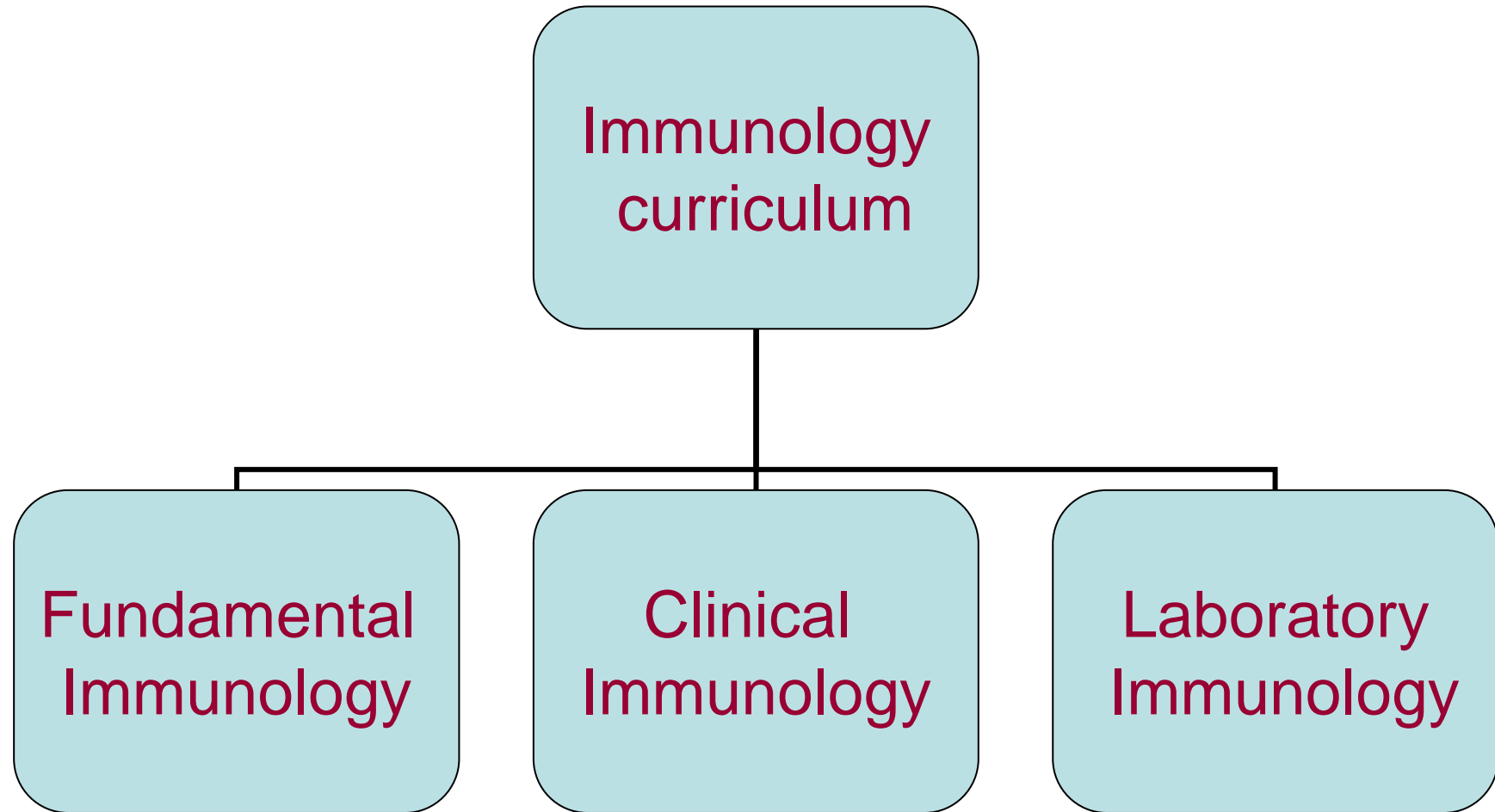
WHO/IUIS definition of Clinical Immunology used as blueprint for developing an Immunology curriculum for Europe

“Clinical Immunology is a **clinical and laboratory discipline** dealing with the study, diagnosis and management of patients with diseases or disease processes resulting from disordered immunological mechanisms, and conditions in which immunological manipulations form an important part of therapy and/or prevention” (*Clin Exp Immunol* 1993;93:484-491)

European curriculum for Immunology

- Designed to cater for medically qualified trainees wishing to practice either combined clinical and laboratory immunology or to concentrate predominantly on laboratory or clinical immunology.
- Includes allergic diseases in view of the immunological principles underlying allergy – inevitable overlap with the Allergology curriculum of UEMS.

Immunology curriculum – subject matter I



Immunology curriculum II -Fundamental Immunology

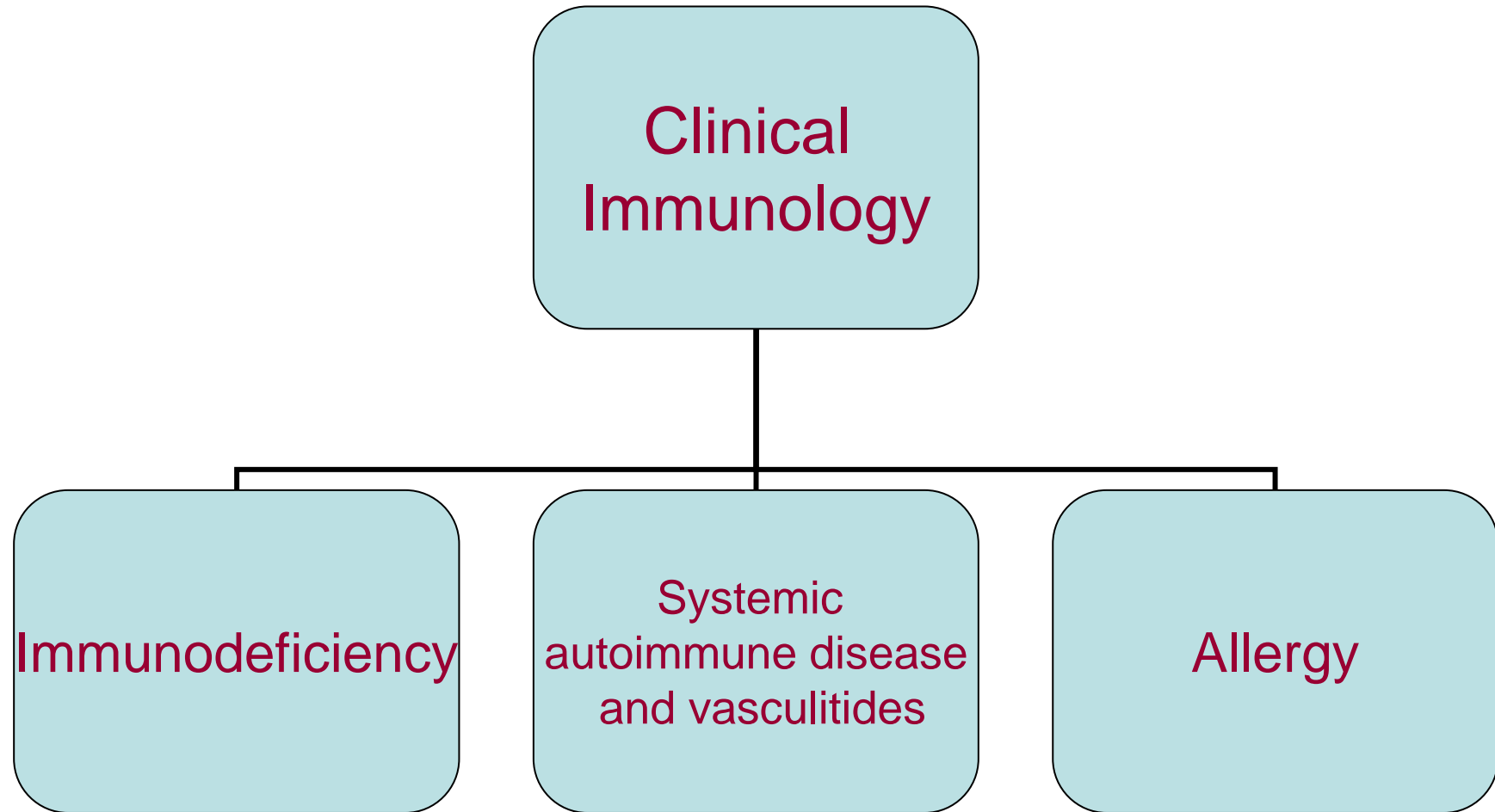
- **Training objectives:**” *The trainee has to acquire a core body of knowledge in fundamental immunology to underpin clinical and laboratory practice”*
- Subject matter:
 - Structure and organisation of the immune system
 - Innate immunity;Inflammation
 - Major Histocompatibility Complex
 - Adaptive immunity
 - Cytokines,chemokines
 - Hypersensitivity mechanisms
 - Immunoregulation

Immunology curriculum III – Clinical Immunology

- **Training objectives:**
 - *“All trainees will be expected to acquire the core body of knowledge to understand the principles and to give consultative advice on the appropriate use of laboratory tests for the prevention, diagnosis and treatment of immune-mediated diseases”*
 - *“To provide the trainee with the skills and knowledge required to assess and treat patients with primary and acquired immunodeficiency diseases as well as rheumatic diseases and vasculitic disorders”*

Immunology curriculum IV

– Clinical Immunology – major subject areas



Immunology curriculum V-

Diagnostic laboratory immunology

- **Training objectives:** *“To provide the trainee with the knowledge and skills required to direct a diagnostic immunology laboratory service”*
- **Principal subject areas:**
 - Immunochemistry
 - Autoimmunity
 - Cellular immunology
 - Allergy
 - Quality assurance, laboratory accreditation

Immunology curriculum VI – generic subject matter

- Research and development
- Data management
- Management and communication skills
- Health and Safety

Relationship between UEMS *Immunology* and *Allergology and Clinical Immunology* curricula

	Immunology	Allergology and Clinical Immunology
Clinical component	++	++ Heavily orientated towards allergy
Laboratory component	++ Laboratory supervision/direction	– Limited to understanding of principles and methodology of assays

Problems for both curricula

- Overlap of clinical elements in relation to systemic autoimmune diseases and vasculitides with organ-based specialties such as rheumatology
- Lessons from the UK where attempts to promote the concept of a pure physician immunologist were unsuccessful due to lack of a significant clinical workload
(Reeves et al. Report of the British Society of Immunology Working Party on Clinical Immunology 1984 Guidelines for training the physician immunologist. Clin Exp Immunol 1985;61:216-8)

Further development of the Immunology curriculum

- Statement of key learning outcomes related to knowledge, skills and attitudes for the major subject areas
- Development of a log book to record personal experience of training
- Consider development of a portfolio to document practice-based learning

Will the Immunology curriculum influence the practice of Immunology across Europe?

- Curriculum - has no legal status at present. Hence, member countries with established training programmes are unlikely to switch nor can they be compelled to do so.
- Its main value will be to serve as a guide for those EU countries wishing to establish new training programmes in Immunology.

Key references

- **Immunology** - *Choremi-Papadopoulou et al. Position statement: training programme in immunology of UEMS Medical Biopathology. Immunology Letters 2005;96:305-310*
- **Allergology and Clinical Immunology** – *Dubois et al. European specialist care in allergology and clinical immunology in the new millenium. Allergy 2000;55:338-9*