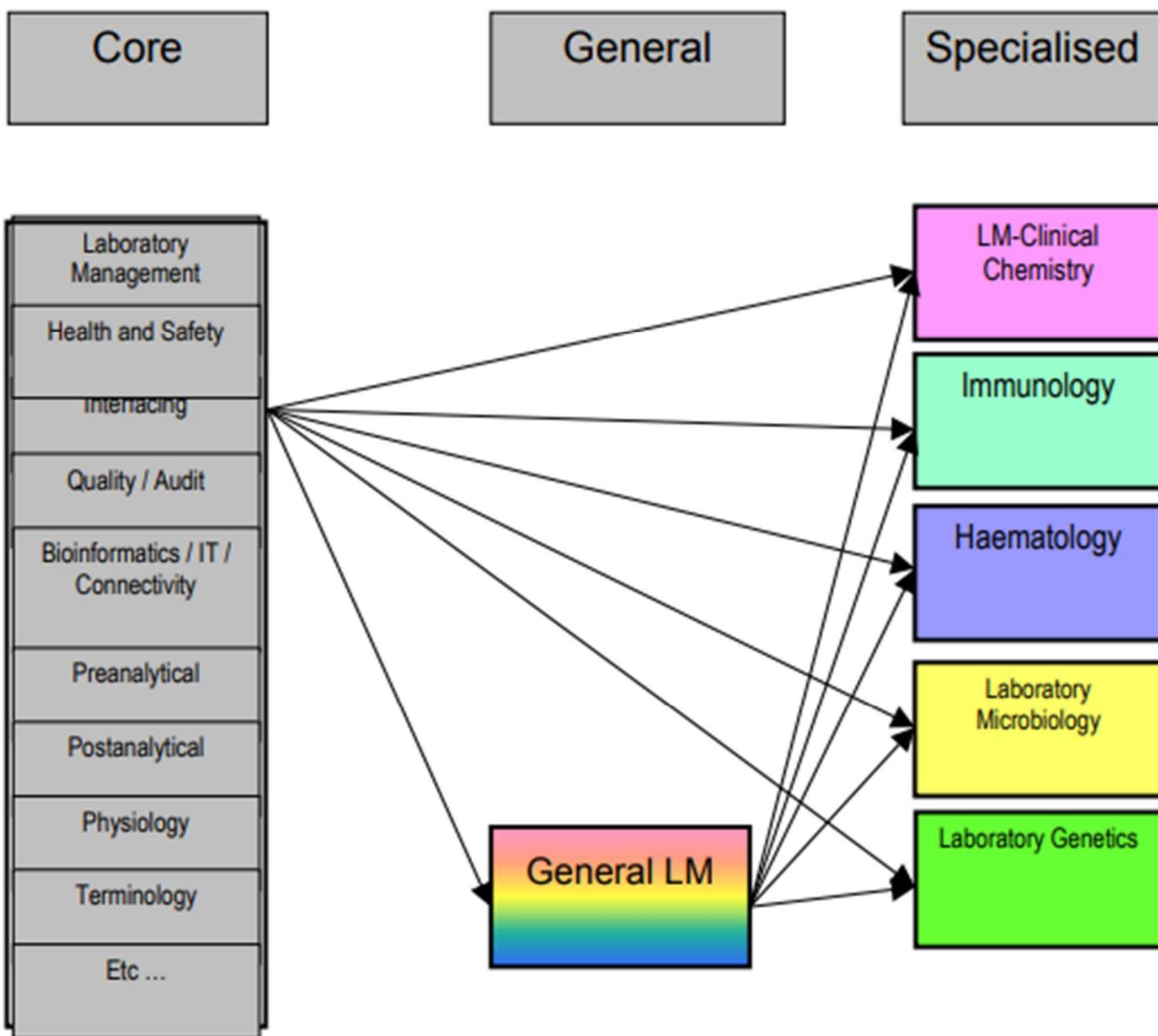


# Professional recognition for medical microbiology

Dr. K. Magerman

Jessa Ziekenhuis Hasselt

UHasselt



# In a European context

- UEMS (Union Européenne des Médecins Spécialistes)
  - Section of Laboratory Medicine/Medical Biopathology
    - Division General Laboratory Medicine/Polyvalent Medical Biopathology
    - Division Laboratory Medicine - Clinical Chemistry
    - Division Clinical and Laboratory Haematology and Transfusion
    - Division Clinical and Laboratory Immunology
    - Division Laboratory Genetics (Genetic Pathology)
  - Section of Medical Microbiology since 2008

# UEMS Belgian representation

- Belgium is a full member of the Section of Laboratory Medicine/Medical Biopathology (division general laboratory medicine/polyvalent medical biopathology), represented by the “Belgische beroepsvereniging van artsen-specialisten in Medische Biopathologie/Union professionnelle belge des médecins spécialistes en biopathologie médicale” (VBS/GBS)
- Because Medical Microbiology is not a recognized speciality, Belgium is an observer member of the Section of Medical Microbiology. The observer reports to the “Belgische beroepsvereniging van artsen-specialisten in Medische Biopathologie/Union professionnelle belge des médecins spécialistes en biopathologie médicale” (VBS/GBS) and BVIKM/SBIMC

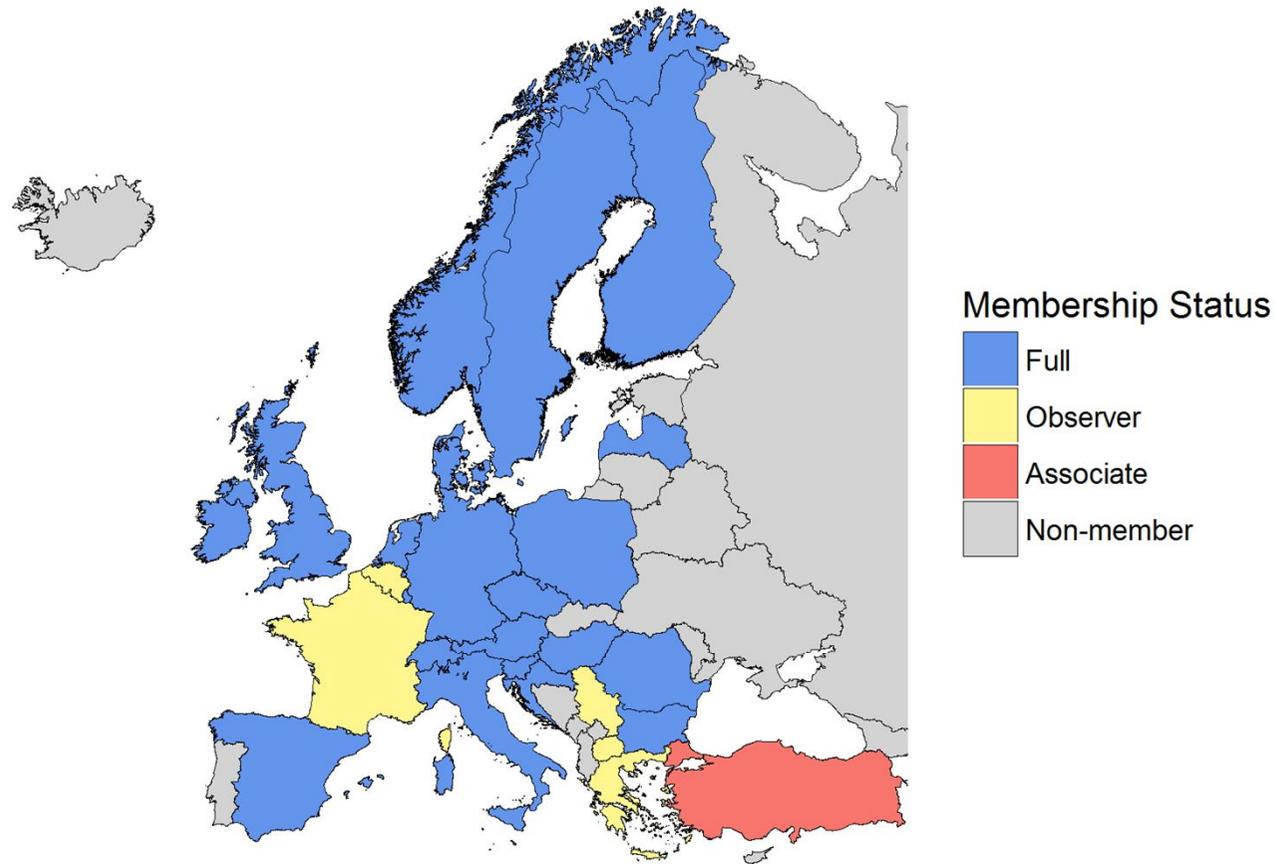
# Section of Laboratory Medicine



# Section of Medical Microbiology



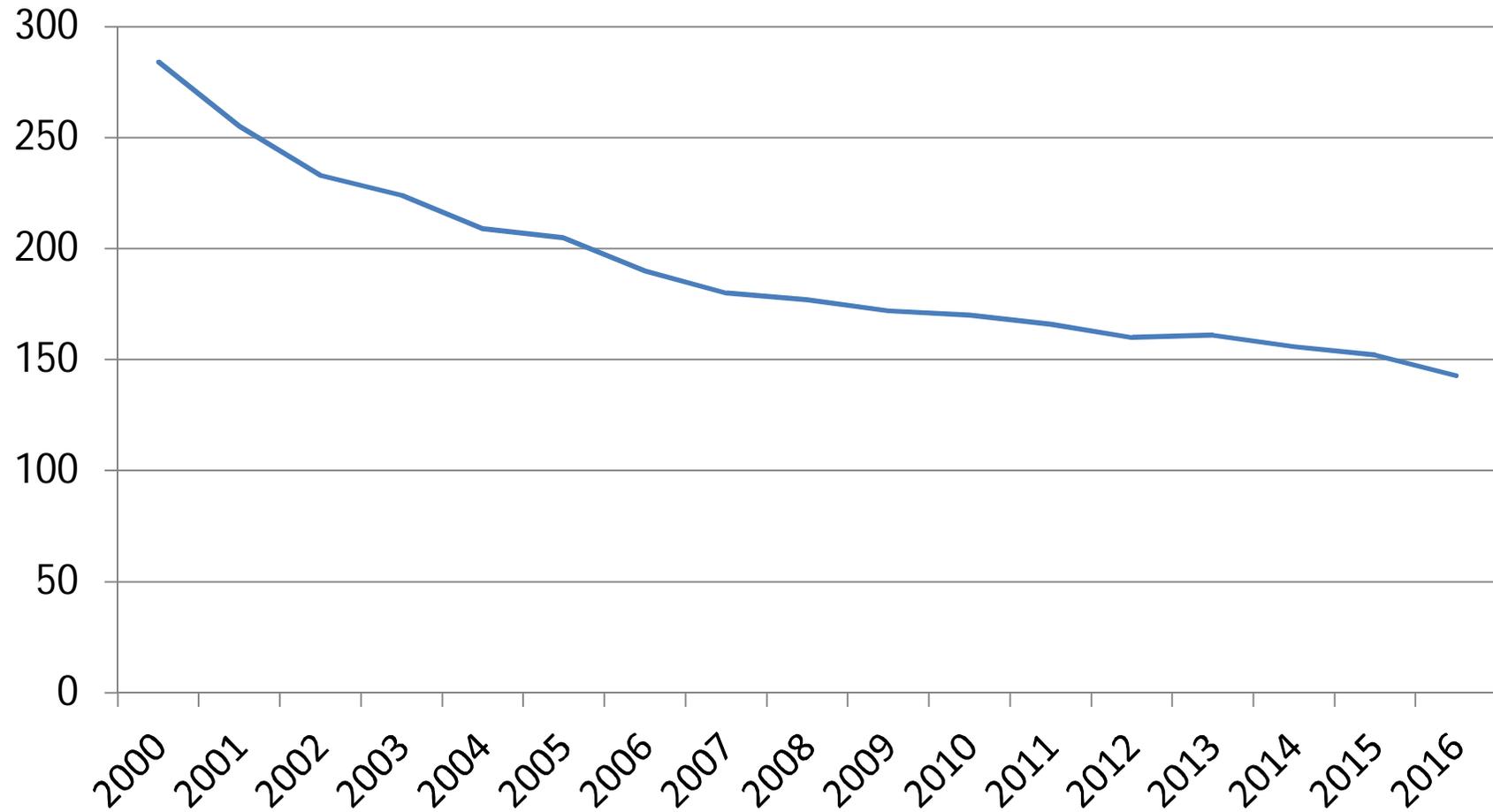
# UEMS Section Medical Microbiology 2017



# Polyvalence versus Monovalence

- The EU today, and even more in the future, will require harmonization of training for mono- and polyvalent specialists in Laboratory Medicine/Medical Biopathology.
- This will lead to well-trained Laboratory Physicians/Medical Biopathologists who safeguard the high quality and safety of General Laboratory Medicine/Polyvalent Medical Biopathology for outpatients in small and medium sized hospitals as well as the monovalent specialist Laboratory Physician/Medical Biopathologist who does the same in large hospitals, university hospitals and in research.

# Total number of participating laboratories in EQC organized by WIV/ISP microbiology



# General Laboratory Medicine/Polyvalent Medical Biopathology specialist training curriculum 2012

- Common core
  - Laboratory management
  - Special laboratory organization
  - Laboratory security
  - Sampling and treatment of specimens
  - Quality control and quality assurance
  - EDP
  - Instruments and automatic analytical devices
  - Evaluation of methods
  - Reporting obligations / Registration
  - Data security
  - Pre-symptomatic diagnostic methods and risk analysis
  - Scientific co-operation with hospitals and physicians

# General Laboratory Medicine/Polyvalent Medical Biopathology specialist training curriculum 2012

- Syllabus in General Laboratory Medicine/Polyvalent Medical Biopathology
  - Special laboratory microbiology (Bacteriology, Virology, Mycology, Parasitology, Serology)
    - Sampling, transport and storage of clinical specimens
    - Disposal of samples and laboratory material
    - Processing of sample material, as well as direct examination/verification, culture and identification of frequent isolated bacteria including mycobacterium from clinical samples of humans
    - Immunologic and serologic tests of bacteria and bacterial infections
    - Molecular biological test of bacteria and mycobacterium
    - Classification methods of bacteria and mycobacterium
    - Antibiotic resistance tests of bacteria and mycobacterium
    - Tests for antibiotic concentration in body liquids

# General Laboratory Medicine/Polyvalent Medical Biopathology specialist training curriculum 2012

- Syllabus in General Laboratory Medicine/Polyvalent Medical Biopathology
  - Specific specialty knowledge in:
    - Work with automatic devices
    - Evaluation of methods
    - Automation of manual methods
    - Disposal of infectious material
    - Preventive measures for the personnel / laboratory worker
    - Laws on epidemic diseases
    - Methods of reporting

# General Laboratory Medicine/Polyvalent Medical Biopathology specialist training curriculum

- Syllabus in General Laboratory  
Medicine/Polyvalent Medical Biopathology
  - Medical knowledge:
    - Epidemiology and symptomatology of infections
    - Therapy of infections with antibiotics, antiviral substances etc.
    - Immunotherapy, immune-prophylaxis
    - Control of nosocomial infections
    - Zoonosis

# Duration training programme General Laboratory Medicine/ Polyvalent Medical Biopathology

- Mandatory to spend 1 year in Internal Medicine or Paediatrics
- 4 years divided for example with 2 years in Laboratory Haematology, Clinical Chemistry and Laboratory Immunology, 18 months in Laboratory Microbiology and Virology, plus 6 months in Laboratory Genetics (with Cytogenetics, and training in DNA/RNA diagnostics)

SECTION OF MEDICAL MICROBIOLOGY  
TRAINING PROGRAMME FOR MEDICAL MICROBIOLOGY  
submitted European Council 21.09.2017

GENERAL AIM:

To produce trained clinical microbiologists who can provide a specialist opinion in the discipline and who should have developed the appropriate management skills to lead a department, if required.

The trained medical microbiologist should be competent to:

1. give advice as a physician on the diagnosis, treatment and prevention of microbial and parasitic diseases.
2. provide a scientific basis for laboratory diagnosis and management; to set protocols and to maintain standards within the laboratory.
3. undertake the management responsibilities required of the director of a clinical microbiology laboratory.
4. to provide expert specialist advice in relation to infection control and prevention in hospitals.

SECTION OF MEDICAL MICROBIOLOGY  
TRAINING PROGRAMME FOR MEDICAL MICROBIOLOGY  
submitted European Council 21.09.2017

GENERAL AIM:

5. propose hospital policies on the control of antibiotic, antiviral, antimycotic and antiparasitic use.
6. collaborate with national surveillance organisations and public health authorities and provide services for these organisations
7. participate in education and training programs for medical microbiologists, infection control doctors, other medical doctors and experts in the field of infectious diseases. There may also be a role in public education, where relevant and feasible.
8. undertake research and development in the field of medical/clinical microbiology and infectious diseases.

SECTION OF MEDICAL MICROBIOLOGY  
TRAINING PROGRAMME FOR MEDICAL MICROBIOLOGY  
submitted European Council 21.09.2017

OBJECTIVES

Over a minimum 5-year period the trainee should acquire or develop:

a) Good clinical care skills

i. History, examination, investigations, treatment (therapeutics) and communication (verbal and written).

ii. Management of infectious diseases.

iii. Time management and decision-making.

b) Specialised factual knowledge of the natural history of infectious diseases.

c) Interpretative skills so that a clinically useful opinion can be derived from laboratory data. Emphasis should be made on the importance of clinical training and multidisciplinary care.

SECTION OF MEDICAL MICROBIOLOGY  
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OBJECTIVES

d) Technical knowledge, gained from familiarity with laboratory technology, so that methodology appropriate to a clinical problem can be chosen and so that quality control and quality assurance procedures can be implemented.

e) Research and development experience. Original thought and critical assessment of published work are important to allow the trainee to contribute in a team, and individually, to the development of the service.

...

SECTION OF MEDICAL MICROBIOLOGY  
TRAINING PROGRAMME FOR MEDICAL MICROBIOLOGY  
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CORE TRAINING PROGRAMME: CLINICAL MICROBIOLOGY  
GENERAL MICROBIOLOGY

Scientific basis of clinical microbiology

Laboratory safety

Sterilisation and Disinfection

Handling of specimens

Data handling

Results reporting

Microscopy

Serologic and antigen-based techniques

Molecular microbiology and other emerging technologies

SECTION OF MEDICAL MICROBIOLOGY  
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CORE TRAINING PROGRAMME: CLINICAL MICROBIOLOGY

BACTERIOLOGY

VIROLOGY

MYCOLOGY

PARASITOLOGY

ANTIMICROBIALS

*INFECTION CONTROL IN HOSPITAL AND COMMUNITY*

*CLINICAL MEDICINE*

LABORATORY MANAGEMENT

SCIENCE PROJECT

# DURATION CORE TRAINING PROGRAMME: CLINICAL MICROBIOLOGY

- Total duration at least 60 months,
- The training in bacteriology, virology, mycology and parasitology should be at least 24 months (bacteriology - 12 months, virology - 8 months, mycology - 2 months and parasitology - 2 months).
- One or more of the subjects (e.g. laboratory management, public health & infection control, scientific basis of clinical microbiology and science) may be integrated within medical microbiology. In this case, documentation for acquired skills is required, and the length of the training in medical microbiology should be adjusted to include these subjects.
- The recommended length of training in laboratory management is - up to 6 months;
- public health and infection control - up to 12 months;
- clinical medicine - minimal 12 months
- science project (6 months) .

# Laboratory Medicine in a Belgian Context

## *Legislation in force*

- 15 SEPTEMBER 1979 Ministerieel besluit tot vaststelling van de bijzondere criteria voor de erkenning van geneesheren-specialisten, stagemeeesters en stagediensten voor de specialiteit van klinische biologie.
- 15 SEPTEMBRE 1979 Arrêté ministériel fixant les critères spéciaux d'agrégation des médecins spécialistes, des maîtres de stage et des services de stage pour la spécialité de biologie clinique

# Laboratory Medicine in a “new” Belgian Context

- Superior council Medical Specialists and General Practitioners advisory council for recognition of medical specialities
  - Established a Working Group (WG) in spring 2017 to review the legislation concerning Clinical Biology (Laboratory Medicine) in Belgium
  - After two meetings of the WG, activities were interrupted because only 3 of 26 final advices concerning specific criteria for other medical specialities had been published in the Official Belgian Gazette.  
Final advices have to be approved by the board of state and the board of state only accepts recent advices.  
In addition the Minister of Public Health is preparing a new system for recognition of medical specialities.  
And even more ... clinical biology is not a priority.

# ECDC and KCE

- ECDC conducted an audit concerning the spread of multidrug resistant organisms in Belgium. I guess they will advise to enhance infection control and antibiotic stewardship.  
*Officially recognize medical microbiologists could be one of their recommendations to the Minister of Public Health to combat MDRO.*
- KCE, Belgian Health Care Knowledge Centre is preparing a report on antibiotic overconsumption in Belgium. I am interested in their advices ...

# Conclusion

Polyvalent laboratory medicine still has a place in Belgian laboratories but taking into account that:

- Belgian laboratories become bigger
- Multidrug resistant micro-organisms are spreading in the community, nursing homes and hospitals
- UEMS prepared an excellent up-to-date training programme for medical microbiology

**Recognition of medical microbiology should be a priority and can be achieved in Belgium as in the majority of European countries.**