



### **Introduction**

In November 2015 a non-binding Memorandum of Understanding was signed between the Union Européenne des Médecins Spécialistes (UEMS) and the European Federation for Immunogenetics (EFI) to create a partnership to promote the quality of medical and scientific practice in the field of Transplantation Immunology. This is to be achieved via a structured high level training scheme and examination in Histocompatibility and Immunogenetics (the European Specialisation in H&I (ESHI) Diploma).

The European Board of Transplant Immunology (EBTI) within the Division of Transplantation of the UEMS was created in 2012. This body aims to promote the highest standards of training for transplant immunologists working in the field of H&I. The EBTI operates as part of the Division of Transplantation under the UEMS Section of Surgery and the European Board of Surgery (EBS). The EBTI, a not-for-profit organisation, operates in close collaboration with EFI.

Training towards the ESHI Diploma qualification is an in-service training plan for medically or scientifically qualified individuals working in H&I laboratories. It is aimed at Directors/Co-Directors/Heads of laboratories and those who wish to progress to this level.

The aim is to ensure a solid training in the skills necessary to undertake the work of a Director/Co-Director of a clinical H&I laboratory. Applicants are assessed for eligibility following a period of training and sit an oral examination. Upon successful completion of the examination the individual is recognised as being able to form a clinically relevant opinion in H&I related issues based upon an applied, contemporary, scientific understanding. This informed opinion will underpin their ability to give clinically relevant advice in all aspects of H&I.

It is recognised that not all H&I specialists will necessarily experience all areas of H&I in their career and as such the EBTI require certain core areas of knowledge from applicants with the option of assessment against additional modules.

All applicants must be able to provide evidence of training in H&I as it relates to supporting clinical solid organ (core Module 1) and/or clinical HSC transplantation (core Module 2).

Additionally, applicants may apply to be assessed for their knowledge in H&I relating to disease association studies (Module 3) and transfusion (Module 4).

So, applicants can apply for up to 4 modules within the ESHI Diploma, with either Module 1 (H&I in solid organ transplantation) or Module 2 (H&I in HSC transplantation) being a mandatory requirement. The resulting Diploma certificate will state which modules have been completed.

At examination it is possible to fail a module but still be awarded a pass in successful modules, although passing one of the core modules is mandatory.

Training must take place in clinical H&I laboratories supporting organ and/or haematopoietic stem cell transplantation programmes, disease association testing and blood transfusion services, depending on the modules being applied for. Practical experience at the bench and experience in clinical liaison must be gained in all areas being applied for. Obviously, it may be necessary to receive training in laboratories other than that in which the candidate is employed to receive sufficient breadth of clinical experience. The trainee must show evidence that they have accumulated the advanced clinical, technical, scientific and managerial skills required to direct a diagnostic H&I laboratory.



To undertake i) the training, ii) the application for eligibility and iii) the examination, the trainee must:

- Have the support of the Lab Director.
- Have an Educational Supervisor who is a current Director or Co-Director of an EFI accredited lab **or** who holds a recognised qualification that shows a specialisation in H&I (e.g. FRCPATH in the UK, Fachimmunogenetiker DGI in Germany, Opleidingseisen Medische Immunologie in the Netherlands, the Especialidad de Immunologia in Spain or the ESHI Certificate (Honorary or by examination). Other supervisor qualifications may also be agreed as being suitable by the European Board of Transplant Immunology, **in advance of training beginning**.
- Train in an H&I laboratory which has achieved EFI accreditation (in solid organ or HSCT transplantation categories) at a date prior to the individual's application for the ESHI Certificate examination. *Training in a non-EFI accredited laboratory may be deemed acceptable, however the candidate must still be able to show appropriate experience/knowledge has been gained during the period of their training. For example, part or all of the training may have been undertaken in an ASHI accredited laboratory. Applicants should ideally discuss their circumstances with the EBTI Board prior to commencement of training to ensure their training environment is deemed suitable.*

### **ESHI Diploma Fellow Re-assessment**

ESHI Diploma Fellows need to complete a record of Continued Medical Education (CME)/ Continued Professional Development (CPD) in the ESHI Certificate modules for which they have received certification over a 3 year cycle. This is to ensure that ESHI Certificate Fellows (received as Honorary or by Examination) retain their competence and knowledge. All holders of the ESHI Diploma will need to submit evidence of 3 years of CME/CPD by the end of calendar year 2023 in order to receive an updated certificate.

Evidence will take the form of either:

- i) personal summaries of participation in nationally recognised local CME/CPD schemes over a 3 year period (e.g. BSHI/FRCPATH in the UK), or
- ii) where no national scheme exists, a summary of activities undertaken within the preceding 3 years. This must be submitted on the 'ESHI CME-CPD Spreadsheet' available on the EFI website with supporting pdf certificates of attendance where appropriate. *The 'ESHI CME-CPD Spreadsheet' explains the required number of 'EFI Educational Credits' (EECs) that must be achieved in different CME-CPD categories.*

Submissions must indicate which modules the applying Fellow wishes to retain competence within (Solid Organ, HSCT, Disease Association and Transfusion). Submissions will be assessed and replacement Certificates sent to Fellows where there is evidence of ongoing H&I experience at a senior level.

### **ESHI Examinations rules**

The ESHI Diploma is obtained on Passing Part I (Eligibility) and Part II (Oral Examination).

#### **Part 1: Eligibility**



1) The candidate can apply for consideration to take the ESHI oral exam when he/she meets one of the following criteria:

- Science graduates; has completed specialist training in H&I under supervision by a Director/ Co-Director of an EFI accredited lab or under supervision of an individual with a recognised specialist qualification in H&I (see above) during a minimum of 5 years (at least 50% FTE) in post in an EFI accredited H&I lab. N.B the training lab(s) must have been granted EFI accreditation during the period of the candidates training i.e. the lab does not necessarily have to have been EFI accredited for the entire duration of the applicants training.

- Medically qualified candidates (those who hold a medical degree and are eligible to use the designation 'MD'); has completed specialist training in H&I under supervision by a Director/ Co-Director of an EFI accredited lab or under supervision of an individual with a recognised specialist qualification in H&I (see above) during a minimum of 3 years (at least 50% FTE) in post in an EFI accredited H&I lab. (Physicians are clinically trained/educated and therefore their understanding and approach towards laboratory test result interpretation includes the clinical outcome which is important in order to put these test results in a clinical context. This explains the difference in minimum time required for training between medically qualified ESHI Diploma candidates and science graduates). N.B the training lab(s) must have been granted EFI accreditation during the period of the candidates training i.e. the lab does not necessarily have to have been EFI accredited for the entire duration of the applicants training.

2) The candidate must also be able to:

- Communicate in the English language

- Submit a training portfolio which demonstrates: 1) continuity and 2) breadth of training covering all aspects of H&I within the modules applied for during their years of training.

The candidate must also provide a breakdown of courses/meetings attended that shows a total of 30 EFI Educational Credits (EECs) over the period of their training, based on the following system:

- Attendance at H&I specific courses (e.g. UK BSHI Higher Specialist Training course, Hesperis Course (ESOT), EFI/ASHI/APHIA Summer School, French SFHI Course etc) 1 EEC/hour of attendance

- Participation at recognised international transplant/immunology/H&I congress (e.g. Annual EFI/ASHI/APHIA meeting, ESOT, EBMT, etc), ■ Attendance 1 EEC/hour of attendance

- First or last authorship (poster or oral) 2 EECs\*

- Participation at recognised national transplant/immunology congress

- Attendance 1 EEC/hour of attendance

- First or last authorship (poster or oral) 2 EECs\*

\*per abstract

- Attendance of a minimum of two national/international educational transplant/immunology meetings (courses, congresses, symposia) and participation with first or last authorship in at least one (poster or oral) is mandatory.

- Demonstrate the agreement of the Head of Department and training supervisor for the application to be submitted.



3) The following qualifications and experience, although not mandatory, are considered of great importance and will count in the applicants favour:

- Local professional qualifications e.g. FRCPath in the UK, Fachimmunogenetiker DGI in Germany, Opleidingseisen Medische Immunologie in the Netherlands or the Especialidad de Immunologia in Spain.
- Higher degree (M.Sc., Ph.D.) in the field of transplantation, transfusion or immunology.
- Publication(s) in peer reviewed journals in the field of transplantation, transfusion or immunology (especially as first or last author).
- Visits to laboratories other than the main training site.

The application will be considered by a sub-committee of the EBTI. The sub-committee will have three members: the Senior or Junior Secretary and two nominated members of the European Board of Transplant Immunology. At least one of the members should not be from the same country as that in which the applicant obtained his/her training in H&I. The applicant will be informed by e-mail on the acceptance or rejection of the application no later than 6 weeks from the date the application was received by the EBTI.

### Part 2: Oral Examination

#### The aim of the examination

The examination process will take into account which modules have been applied for and will assess whether trainees working towards specialisation in H&I have acquired the requisite highly specialised scientific knowledge, clinical and laboratory skills and attitudes required to, *inter alia*:

- ◆ Advise on donor/recipient compatibility for transplantation by providing a risk assessment based on H&I factors.
- ◆ Advise on the relevance of HLA type to disease diagnosis and patient management.
- ◆ Provide H&I related advice relevant to the treatment of patients with blood products.
- ◆ Professionally direct a diagnostic H&I laboratory service.

The oral examination will determine whether a candidate has successfully acquired the core body of knowledge and basic skills that underpin the ability to practise H&I at Director/Co-Director level, encompassing fundamental concepts of Histocompatibility, Immunogenetics and the principles of diagnostic and therapeutic H&I.

The standard that the candidates will be expected to achieve in the assessment will be commensurate with having completed 5 years in post (at least 50% FTE) for science graduates. For medically qualified candidates, the ESHI exam will normally be taken after a minimum of 3 years training (at least 50% FTE) and specialisation in H&I.

Physicians are clinically trained/educated and therefore their understanding and approach towards laboratory test result interpretation includes the clinical outcome which is important in order to put these test results in a clinical context. This explains the difference in minimum time required for training between medically qualified ESHI certificate candidates and science graduates.

The overall purpose of the oral examination is to provide assurance that a candidate who has successfully completed the ESHI training portfolio and has successfully submitted an eligibility application to EBTI is fit to practice at the level of a Director/Co-Director of an EBTI accredited laboratory.



### **Format of the examination**

Communication skills are essential for Directors and Co-Directors of H&I laboratories to enable them to offer appropriate clinical advice to their colleagues and to think through the consequences of their advice for patient management. The oral examination will assess these skills, in addition to the candidate's knowledge of the latest developments in the field of H&I, laboratory management and management structures, budgetary control, audit, health and safety at work, quality assurance and training. The oral examination will last for 60-90 minutes and will be undertaken by three-four examiners to ensure coverage of those areas of the syllabus that relate to the modules the candidate has applied for.

The candidate will be expected to answer questions on relevant areas of the syllabus, and also to discuss with the examiners two case studies and a scientific paper which will be given to the candidate one hour before the oral examination. The examiners will be made aware of the candidates in advance of the examination and will be asked to declare any conflicts. The candidates will not be made aware of the identity of the examiners prior to the examination.

The examination will be held once or twice a year at the EFI Conference and/or the Autumn EFI Business Meetings depending on demand. Applications for eligibility will need to be received at EBTI at least 3 months prior to the examination date, which will be made known in advance.

The decision of the examining board is final and is not subject to appeal.

The candidate is informed via e-mail regarding the result of the examination no later than a week from the date of the exam.

The successful candidates are awarded the European Specialisation in H&I Diploma and are provided with the relevant Diploma no later than a month from the date of the examination. As candidates are assessed against the modules applied for it is possible that they may fail some modules and pass others. This is acceptable, although at least one of the core modules must be passed. The Diploma granted will indicate the modules which have been passed.

If a candidate fails they may re-submit for eligibility to be examined again the following year without resubmission of documentation, although a re-examination fee will still have to be paid. If applying for re-examination at a date over 1 year from initial examination, a full application for eligibility will have to be made and all documentation will have to be provided again. If the candidate fails twice they will be asked to undertake a period of at least 2 years extra training before re-application.