

AN HLA TYPING 'EDUCATIONAL' SCHEME OPERATED BY UK NEQAS FOR H & I



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Introduction

The UK National External Quality Assessment Schemes for Histocompatibility and Immunogenetics (UK NEQAS for H&I) have established an 'Educational Scheme'.

Comments, mainly at the UK NEQAS for H&I Annual General Meetings indicated that participants wanted to HLA type a small number of 'challenging' samples each year. For example those possessing rare HLA alleles, expression variants, or difficult or unusual allele and/or specificity combinations.

Questionnaire

In addition a questionnaire concerning an 'Educational Scheme' sent to 49 laboratories participating in one or more of UK NEQAS for H & I's existing Schemes produced the following response:

37 (76%) of laboratories replied: 6 were not interested, 14 wanted an HLA typing Scheme covering serology and DNA-based typing, 15 a DNA-based typing only Scheme and 2 a serology only Scheme.

The Scheme

The UK NEQAS for H&I Educational Scheme was devised that:

- Serves both serological and DNA-based HLA typing.
- Is free to participants of the current Schemes 1A (HLA Phenotyping) and/or Scheme 4 (DNA Typing).
- Is not assessed.
- Provides written information on the HLA locus or loci of particular interest and suggestions for typing by serology and/or DNA-based techniques.
- Provides results' analysis, and other data and references on the specificities and/or alleles of interest.
- Currently provides 4 test samples, in 2 'send-outs' per year.

Educational Scheme's first year

Four samples were distributed in 2002 and 41 participants returned results.

Overall, around 22 laboratories performed serology for HLA-A and B, 4 for HLA-C and 8 for DR, DQ; 34 performed DNA-based HLA-A,B,C,DR,DQ typing and about 3 laboratories performed serology, DNA-based HLA-A,B,C or DR,DQ typing only.

The areas of interest of the 4 samples were:

Sample 1 – Possessed A*03 null, not A*0303N with suggestions for typing by serology and DNA.

Samples 2 - DRB1*0404, DRB1*0409-for typing by 'high resolution' DNA-based methods.

Sample 3 - A*03 null, not A*0303N and not the same as sample 1, for typing by serology and DNA.

Sample 4 - A*3204 for typing by serology and DNA.

Schemes' findings

The 2 examples of A*03 null alleles typed generally as expected by serology and DNA; around 8 participants, who performed serology and DNA typing commented on the likelihood of A*03 null or A*0303N or not-A*0303N.

For Sample 2 - 16 labs reported DRB1*04 or large *04 allele groups; 8 labs reported two incorrect alleles; 7 two allele groups of up to three different alleles in each that included DRB1*0404, *0409, and 3 labs reported DRB1*0404, *0409.

Sample 4 - overall, 19 labs correctly identified or queried HLA-A*3204 and 4 reported A32. 13 labs reported HLA-A3 and 3 other laboratories were unsure of the second allele/specificity.

Comment

It appears, from participants' remarks, that the first year of this Scheme was viewed as being worthwhile and certainly 'educational'. Accordingly, it will be continued for a further year, when its usefulness to the H&I community will be reviewed.