European DNA Profiling (EDNAP) Group Meeting

Venezia, October 16, 1993.

This was an open EDNAP meeting held during the 15th International Congress of the International Society of Forensic Haemogenetics, Palazzo del Cinema, Lido di Venezia, Italy.

Chairman: *Prof. Vincenzo Pascali.*

1. Report of the exercise involving HumTHO1, HumvWA, HumFES and HumF13A1. (see Annex 1).

Peter Gill outlined the purpose of the EDNAP programme of collaborative exercises in that the aim was to promote the standardisation of DNA profiling techniques in Europe. The first PCR based exercise was to conduct an interlaboratory comparison of two types of STR's. HumTHO1, with a small number of alleles and ACTBP2 (SE 33) with a large number of alleles. The participating laboratories were asked to type these by any method considered suitable. The results for HumTHO1 presented few problems and all the laboratories taking part obtained satisfactory results. Typing ACTBP2 was problematic and illustrated that it did not lend itself to the variety of techniques used. The assignment of alleles was best carried out using an ABI sequencer. It was thus obvious that STR systems of the HumTHO1 variety were more successful in this context, as the assignment of the alleles of ACTBP2 was too complex.

A second collaborative exercise was sent out to 43 laboratories in Europe, USA, Canada, Israel, New Zealand and Russia. Laboratories were asked to type the STR's HumTHO1, HumvWA, HumFES and HumF13A1 either as a quadruplex, for those laboratories possessing an ABI sequencer, or to be typed singly for those using manual methods.

To date 23 laboratories have sent returns, with approximately half using fluorescent dyes and an automated system. Most laboratories used denaturing gel systems, with only two using native gels. The results (which are summarised in Annex 1), overall showed that these systems could be typed by a variety of methods yielding satisfactory results.

2. Possible EEC funding for EDNAP.

Peter Gill reported that as a result of the previous application the document was rewritten and a second application made. This was turned down by the Ministers on the grounds of 'creeping competence'. Constituent EEC countries are anxious to keep sovereignty in certain areas. One of these areas is Law and Order, under which EDNAP is defined. The next step is unclear but it appears that future applications are blocked. No suggestions to continue the case for future funding were made.

3. Progress on the development of PCR based systems.

Niels Morling (Copenhagen)

DQa and D1S80 are being used in casework. An ABI sequencer has been purchased and developmental work is continuing on the CRSE quadruplex.

Angel Carracedo (Santiago de Compostela)

An ABI sequencer has been purchased and population studies are being carried out on 5 STR's.

Ernesto D'Aloja (Rome)

An ALF (Pharmacia) sequencer has been purchased and work is being carried out to convert STR systems, previously typed on PAGE, to this instrument.

Hermann Schmitter (Weisbaden)

Four PCR systems have been established in casework, D1S80 and ApoB and the STR's ACTBP2 and D21S11, which are run on the ABI sequencer. The CRSE quadruplex is currently being evaluated.

Brian Parkin (MPFSL, London)

The CRSE quadruplex and ACTBP2 are currently being evaluated using an ABI sequencer. Work is continuing with MVR which is producing excellent results on 40cm agarose gels. Redesigned primers have been used to give 22 repeats in attempts to transfer the system to the ABI sequencer.

Ate Kloosterman (Rijswijk)

An ABI sequencer has been ordered. ACTBP2 and HumTHO1 are being run on polyacrylamide gels with silver staining. These systems are occasionally used in casework.

Patrick Lincoln (London Hospital)

The validation of HumTHO1, HumFES, HumvWA and HumF13A1 is being carried out by agarose gel electrophoresis.

Bernd Brinkmann (Munster)

ACTBP2, HumTHO1 and HumvWA are being routinely used in casework, run as single plexes on the ABI sequencer. MCT118, YNZ22 and ApoB are additionally run if more information is required. HumFES, D21S11, MBP and HumF13A1 are being developed as single plexes and HumTHO1, HumvWA, HumFES and HumF13A1 are being evaluated as a quadruplex.

Patrice Mangin (Strasbourg)

An ABI sequencer has been ordered. Population data bases for a number of STR's are being compiled using polyacrylamide gel electrophoresis.

Bjornar Olaisen (Oslo)

Using the ABI sequencer, it is hoped to introduce HumTHO1, HumvWA, HumFES and HumF13A1 into casework in January 1994. At present, these are run as duplexes.

Stig Holgersson (Linkoping)

The STR's, HumTHO1 and ACTBP2 are routinely used in casework using the ABI sequencer. It is planned to introduce HumTHO1, HumFES, HumvWA and HumFES as a quadruplex into casework in January 1994)

Vivian Johnsson (Helsinki)

D1S80, APO B and YNZ 22 are in regular casework use, analyzed by polyacrylamide gel electrophoresis and silver staining. HumTHO1 is ready for casework but has not yet been used. Work is about to begin to develop HumFES.

Secretarial footnote:

The following information was provided outside the EDNAP meeting

Walter Bar (Zurich)

Using the ABI sequencer, ACTBP2 and HumTHO1 (as a duplex); HumvWA and HumF13A1 (as a duplex) and D21S11 and HumFES are regularly used in casework. In addition, DQa is also used.

4. The next EDNAP meeting.

The date and venue of the next meeting has not yet been finalised and will be announced in due course.

Sincere thanks are extended to Prof. Vincenzo Pascali for providing the venue for the meeting and for his efforts in the organisation.