EDNAP

European DNA Profiling (EDNAP) Meeting

London, UK. 24 February 1996

Chairman: Peter D Martin

List of participants is attached.

REPORT OF THE MEETING

The Strasbourg laboratory was not represented as Hélène Pfitzinger was already committed to attendance at a meeting in the USA.

1. Update on the current EDNAP exercise

Peter Gill presented the results obtained from the current exercise which was designed to evaluate the use of the loci D21S11 and HUMFIBRA.
Seven (7) bloodstains, one of which was a control, were submitted to each laboratory for PCR/STR analysis. Fourteen (14) laboratories participated, eleven (11) of which used ABI sequencers, two (2) used Pharmacia sequencers and one laboratory used silver staining.
Twelve (12) of the laboratories obtained correct results and one laboratory produced correct results with D21S11 but had minor differences with HUMFIBRA. The remaining laboratory had more serious discrepancies.

It was generally agreed that the use of the Pharmacia sequencer was fit for the purpose.

There was some discussion concerning the presence of stutter bands and their effect on the interpretation of the results in a casework situation.

Peter Gill will prepare will prepare a draft communication for members to assess. This will include the philosophy of the criteria against which loci will be judged for recommendation leading to harmonisation.

2. Nomenclature for complex loci

The discussion centred on the difficulties associated with the loci in which there is more than one repeating unit. There were differing recommendations offered to the meeting but the one which found universal favour concerned the production of an overall number for each fragment based on comparison with a known, defined allele. In order to achieve this it is necessary to have a comprehensive agreed internal ladder which would be used by all laboratories.

The proposal was to adhere to the DNA Commission recommendation as far as possible e.g. with HUMTHO1 and HUMFIBRA but, where complex loci are used, to give a number

based on comparison with the bp size of a known allele. As the alleles, determined from casework samples, would not be sequenced it would be necessary to declare a **Type 700** where the known allele is 700bp.

It was appreciated that there will be two systems being used but, as the science is still evolving, we will use both systems and recognise that we may have to choose one or the other for all systems in the future. It was the wish of the meeting that this proposal should be the basis of a communication to Forensic Science International.

Steven Rand and Peter Gill will prepare a draft recommendation for consideration by members.

3. Next EDNAP exercise

Björnar Olaisen presented the work from the Oslo lab which demonstrated the production of a comprehensive internal allelic ladder for use within a system of the three loci ACTBP2 (SE33), APOA1 and D11S554. The standard deviation obtained shows that alleles can be reliably determined. The ladder was prepared by amplifying individual alleles and mixing the products. This is a powerful system with an average probability of a match estimated at 5 X 10^{-7} Nine (9) EDNAP laboratories are already using SE33. databases.

Angel Carracedo presented the results from a locus, D12S391, which is a simple 4bp repeat but has a DP > D21S11.

It was proposed, and accepted, that the next exercise should test the triplex system from Oslo and the D21S11 locus from Santiago de Compostela.

1. Björnar Olaisen will provide the ladder for the detection of alleles in the triplex together with the primer sequences and each laboratory should prepare their own primers using the colours designated by Oslo. He will also provide the result for one stain which can be used as a control.

2. Angel Carracedo will supply the allelic ladder and primer information for the D12S391 locus analysis.

3. Participants should use the same bloodstains as for the last exercise. If laboratories require new samples, please contact Peter Gill.

4. All results should be recorded in terms of base pairs and sent to Peter Gill who will do the analysis in consultation with Oslo and Santiago de Compostela.

Vince Pascali has acquired information on a number of loci from Utah Marker Development Group which might be good candidates for harmonisation. He will send the information to members for discussion at the next meeting.

4. EC grant application (attached)

Peter Schneider outlined the application for funding future EDNAP work for travel, accommodation and limited reagent purchase. The grant would be for a period of three years. The application will be made on the basis of two meetings per year together with some fellowship interchanges. It is also appreciated that there might be a requirement to absorb some partners designated by the funding agency.

There was some discussion concerning the conflict which might arise between membership of EDNAP and ENFSI (European Network of Forensic Science Institutes) with regard to representation at the meetings and general policy which might be made with respect to DNA profiling. The meeting was unable to resolve this situation but there was some debate on the need to expand EDNAP to include other laboratories who are proficient in DNA profiling and wish to attend. This will be discussed at the next meeting. Peter Martin agreed to invite participation from the Irish Police laboratory in Dublin as this is the only EC country not represented in EDNAP.

The meeting still wished Peter Schneider to continue with the application for funding. Peter Schneider will send a draft list of objectives to member laboratories for comment.

5. Ethical and Legal Issues Meeting - Mainz - October 1996

Peter Schneider presented the aims and objectives of this meeting. The grant application and programme of the meeting are appended to this report.

The Mainz laboratory will attempt to get funding for at least one member from each EDNAP laboratory. Each representative should prepare a short communication on the ethical and legal issues together with the privacy rights for their countries.

6. Next EDNAP Meeting

This will be held in Mainz on Sunday 20 October 1996 to coincide with the above meeting. Peter Martin will remain as secretary, with the help of Julia Andersen, until the next meeting.

7. Identification error

Peter Gill informed the meeting that the locus D6S502, which forms part of the hexaplex used in the UK National DNA Database, has been mis-designated by the laboratory contributing to the CHLC database, and has now been identified as D8S1179.

Peter Gill distributed a survey of loci which are being used by member laboratories.