EUROPEAN DNA PROFILING GROUP (EDNAP) MEETING

TALLINN, ESTONIA

11 – 12 SEPTEMBER 2006

Host: Anu Aaspollu
Chairman: Niels Morling

A list of participants is attached.

Welcome
Anu Aaspollu welcomed members to Tallinn.

Update on publications Niels Morling
Peter Gill explained the background and the goals with the recent recommendations on interpretation of mixtures of the DNA Commission of the ISFG:

> Gill P, Brenner CH, Buckleton J.S., Carracedo A, Krawczak M, Mayr WR, Morling N, Prinz M, Schneider PM, Weir PM. DNA commission of the International Society of Forensic Genetics: Recommendations on the interpretation of mixtures. Forensic Sci Int 2006; 160: 90 – 101.

Update on other activities
EMPOP Walther Parson
Walther Parson presented a short update of the EMPOP database project and referred to the upcoming Y-STR Conference in Innsbruck.

Genemapper Walther Parson
Walther Parson had collected a list of wishes and problems identified from members. A Genemapper email group was established with

Ingo Bastisch
Peter Gill
Viljo de Leeuw
Niels Morling
Geraldine O'Donnell
Walther Parson.

Peter Gill will send the comments from the FSS. Members not present at the meeting are encouraged to send comments to Walther Parson.

The replies will be organised into three categories:

Problems with the software, e.g. export induces changes in the order of the loci
Convenience issues
Future suggestions

Update on exercises

SNPforID SNP exercise Niels Morling

The majority of the data have been analysed. Two labs scored all 29 SNPs in 10 samples correctly and two labs scored 9 samples correctly. The median correctness was 98.6 % with a range from 90 % to 100 %. The drop out rate ranged from zero to 17.7 %. The SNPforID labs that had previous experience in work with the method performed better than the remaining labs.

It was decided to publish the results.

Updates from other groups

ENFSI

ENFSI members shortly mentioned the work that is going on in the various groups - see the attached agenda from the ENFSI meeting.

SWGDAM & FBI David Coffman

Peter Gill reported based on a PowerPoint presentation that David Coffman had sent (attached).

NIST

John Butler was unable to attend the meeting and had kindly sent a pdf-file with slides summarising the present status (attached) that was presented.

SNPforID Peter Schneider

All major results of the SNPforID project have been published in "Electrophoresis", most notably the three main results on the autosomal 52-plex (Sanchez et al.), the Y-chromosomal 29-plex (Brion et al.) and the mtDNA multiplex for haplogroup H sub typing (Brandstätter et al.). A forensic validation study of the 52-plex has been carried out this year. The results will be presented during the Innsbruck DNA meeting at the end of September. Furthermore, two companies have used the information published on the 52-plex to develop alternative SNP typing assays: Biotype AG of Dresden, Germany, using a microarray-based detection method, and Applied Biosystems, using a modified SNPlex technology termed "GenePlex" for the simultaneous analysis of 48 SNPs in a single capillary separation. Both approaches will be presented as well at the upcoming Innsbruck meeting.

ISFG DNA Commission on disaster victim identification (DVI) Peter Schneider

A new commission has been introduced following the 2005 ISFG congress to formulate generally acceptable scientific standards for the most efficient use of DNA-based victim identification methods. The commission is chaired by Mecki Prinz, and a manuscript has been prepared on "Recommendations regarding the role of forensic genetics for disaster victim identification (DVI)". The recommendations have been designated to provide guidance for forensic genetic laboratories on establishing preparedness, on collecting and storing ante mortem and post mortem samples suitable for DNA analysis, on DNA extraction and genetic typing strategies, on data management, and on issues related to the biostatistical interpretation and reporting of results. The manuscript will be submitted by the end of the month.

Interpol Richard Scheithauer

The 4th DNA Users' Conference in November 2005 in Lyons was successful.
The Interpol DNA database is in operation and already successful - ready to support any of the 184 member states. Each member state can give precise instructions on what shall happen with its DNA profiles. This includes the possibility for demanding a one time search-matching event and immediate removal of the DNA profile to long term storage of the DNA profile, or search-matching with profiles from accredited labs only. The Interpol DNA search mechanism allows

- matching with all loci entered (i.e. not only the ISSOL)
- high capacity
- the next version of CODIS software will have an export function for Interpol database

For further details, see www.interpol.int.

The Interpol DNA Gateway Charter is available for official use only via the Interpol National Crime Bureau, the national Interpol Liaison Officer, or the Interpol DNA Unit (please see http://www.interpol.int/Public/Forensic/dna/dnaTeam.asp).

The next meeting will be held in October 2006 in Bruxelles.

Future activities

DNA-database quality issues Peter Gill

In some databases, the rate of erroneous DNA profiles is unknown. Errors may have various causes, including errors in the DNA profiles supplied to the database. It was generally agreed that accreditation of a laboratory does not guarantee that DNA profiles supplied for a database are free of errors. Thus, further measures that focus on this problem are necessary to ensure the quality of supplied DNA profiles, including proficiency testing, concordance testing, etc. Peter Gill, Peter Schneider and Niels Morling will start an email group that will analyse the problems and indicate ways forward. Members who want to participate are invited to contact Peter Gill.

During the ENFSI meeting, members expressed concerns about publication and preferred that the issues were addressed that the ENFSI DNA Database Group.

Interpretation of DNA-mixtures Peter Gill

The need for further activities concerning interpretation of DNA mixtures was discussed. Some EDNAP laboratories express the weight of the evidence by means of the LR-method, some calculate and report only the exclusion chance (which does not consider the genotype of the suspect), while approximately 50 % of the labs do not calculate LRs for mixtures.
Copenhagen will organise a pre-congress educational workshop before the ISFG 2007 congress with – among others – a two days course in interpretation of DNA mixtures. The teachers will be Peter Gill and other colleagues within the field. The need for expert systems was discussed. Peter Gill and Niels Morling will set up an email group in order to find ways forward.

AB miniSTR kit Peter Gill

AB has expressed interest in a collaborative EDNAP exercise. The terms are to be discussed with AB. Peter Gill, Peter Schneider and Niels Morling will contact AB.

mtDNA-SNP collaborative exercise Walther Parson

The exercise will be conducted using SNaPshot technology and an mtDNA-SNP-multiplex, which is described in detail in

Brandstätter A, Parsons TJ, and Parson W. Rapid screening of mtDNA coding region SNPs for the identification of west European Caucasian haplogroups. Int J Legal Med 2003; 117: 291-8.

The multiplex targets 16 sites of the mitochondrial genome and, as a set, they are indicative for the 9 major haplogroups found in West Eurasia (H, V, J, T, U, K, W, X, I). The Innsbruck laboratory will send samples, aliquots of the multiplex and a protocol – most likely in November 2006.

EDNAP web site update (www.isfg.org/ednap/ednap.htm) Peter Schneider

Since the last meeting, no new contents have been added. The references will be updated. Hermann Schmitter will help to compile a list of all EDNAP meetings since the group was founded in 1989.

Any other business

There was no other business.

Next meeting

The next EDNAP meeting will be held in conjunction with the next ENFSI DNA Working Grouping Meeting in Krakow, Poland in late April 2007.

Closing of the meeting

The meeting closed with sincere thanks to Anu Aaspollu for hosting the meeting.

Attachments

- List of participants
- ENFSI DNA WG Agenda
- NIST-update
- SWGDAM-update.