

# EUROPEAN DNA PROFILING GROUP (EDNAP) MEETING

Edinburgh, Scotland

20 October 2009

Host: Jim Dunlop.  
Chairman: Niels Morling.

A list of participants is attached.

## Welcome

Jim Dunlop

Jim Dunlop welcomed members to Edinburgh.

## Update on exercises and other activities

### *mRNA*

Cordula Haas

The 2<sup>nd</sup> version of the manuscript was accepted by the group and is ready for submission to the FSI: Genetics. Members agreed to continue the work with standardization of the mRNA investigations according to the summary of the project plan (presentation attached). Cordula Haas will, assisted by Jack Ballantyne, formulate a detailed project plan and in January 2010 send out the reagents and samples. Laboratories are expected to send the results to Zürich in the beginning of March 2010. The collated results will be circulated to the participating laboratories before the EDNAP meeting in April 2010.

### *EMPOP*

Walther Parson

Walther Parson gave an update on technical and collaborative mtDNA studies (presentation attached). New amplification schemes for the mtDNA control region [1] and the entire mtDNA genome [2] were presented. The mtDNA control region was typed in individuals from the following countries: Argentina [3], Tunisia and Morocco [4], North Thailand [5] and Uzbekistan (Irwin et al, in submission). EMPOP contributed to a population study on haplogroup U5b3 [6] and to the determination of point heteroplasmy in the control region [7]. Finally, a summary on the review of all EMPOP V1 data was presented, which will be posted on the new EMPOP web page.

## References:

1. Berger C and Parson W (2009) Mini-midi-mito: Adapting the amplification and sequencing strategy of mtDNA to the degradation state of crime scene samples. *Forensic Sci Int Genet* 3:149-153
2. Fendt L et al (2009) Sequencing strategy for the whole mitochondrial genome resulting in high quality sequences. *BMC Genomics* 10:139
3. Bobillo C et al (2009) Amerindian mitochondrial DNA haplogroups predominate in the population of Argentina: towards a first nationwide forensic mitochondrial DNA sequence database. *Int J Legal Med* 10.1007/s00414-009-0366-3
4. Turchi C et al (2009) Polymorphisms of mtDNA control region in Tunisian and Moroccan populations: An enrichment of forensic mtDNA databases with Northern Africa data. *Forensic Sci Int Genet* 3: 166-172
5. Zimmermann B et al (2009) Forensic and phylogeographic characterization of mtDNA lineages from northern Thailand (Chiang Mai). *Int J Leg Med* 10.1007/s00414-009-0373-4

6. Pala M et al (2009) Mitochondrial haplogroup U5b3: a distant echo of the epipaleolithic in Italy and the legacy of the early Sardinians. *Am J Hum Genet* 84: 814-821
7. Irwin J et al (2009) Investigation of point heteroplasmy in the human mitochondrial DNA control region: a synthesis of observations from over 5000 global population samples. *J Mol Evol* 68: 516-527

### **Updates from other groups**

#### *ENFSI*

Ingo Bastisch

Ingo Bastisch reported on the activities of the various subgroups (presentation attached).

#### *University of Central Florida*

Jack Ballantyne

Jack Ballantyne presented the research activities of the group (presentation attached).

#### *Interpol*

Richard Scheithauer

The Interpol DNA database is ready to include all loci present in all presently available forensic STR kits as well as future loci. The match reports show the data of the overlapping loci. A training video is presently being produced. The video shows the proper use of DNA evidence in national and international DNA databases. The video will be released – and dispatched among EDNAP members in the middle of 2010. The Interpol DNA users' meeting for investigating officers in Lyon 2009 has been postponed until September 2010.

#### *SNPforID GenPlex exercise*

Niels Morling

The results of the exercise were presented at the ISFG congress 2009 and an article is in press in the FSI: Genetics Supplement Series, which is freely available, e.g. through the ISFG web site. A full length article will be submitted as soon as possible.

#### *ISFG*

Niels Morling

Niels Morling gave an update on the activities of the ISFG (presentation attached).

#### *ISFG DNA Commission*

Peter Gill

Peter Gill gave a short summary of the present state of the work of the ISFG DNA Commission on DNA of limited quantity and/or quality.

#### *Forensim – a DNA mixture interpretation tool*

Hinda Haned

Hinda Haned presented the programme (presentation attached). A link to the web site of the application can be found at the ISFG web site.

#### *A freeware analytical tool to analyse mixtures using peak height/area*

Peter Gill

Peter Gill briefly presented a spreadsheet for the evaluation of DNA mixtures by means of peak heights. The spreadsheet is not validated and only meant as an experimental and educational tool. The Excel spreadsheet and a PowerPoint presentation with instructions for use can be downloaded from the ISFG web site.

#### *Considerations on biostatistical IT-tools*

Niels Morling

The EDNAP group decided to support the development of freely available IT-tools for the interpretation of DNA profiles and encouraged the ISFG to establish a site on the ISFG web site that can offer access to free IT-tools either directly or by links to the relevant web sites.

### *Presentation of popSTR*

Chris Phillips

Chris Phillips presented the status of the web site popSTR (<http://spsmart.cesga.es/popstr.php>).

### *EU Funding*

Peter Schneider

Peter Schneider presented the present possibilities for obtaining support from the EU (presentation attached).

### **EDNAP web site update** ([www.isfg.org/EDNAP](http://www.isfg.org/EDNAP))

Peter Schneider

Minutes from previous meetings will be posted on the web site.

### **Any other business**

There were no other business.

### **Next meeting**

The next EDNAP meeting will be held in Den Haag in conjunction with the next ENFSI DNA Working Group Meeting in April 2009 (the date to be fixed).

### **Closing of the meeting**

The meeting closed with sincere thanks to Jim Dunlop.

### **Attachments**

- List of participants
- Presentations by
  - Cordula Haas: mRNA exercises
  - Walther Parson: Update on EMPOP activities
  - Ingo Bastisch: Summary of ENFSI activities
  - Jack Ballantyne: Update on research at the National Center for Forensic Sciences
  - Niels Morling: Update from the ISFG
  - Hinda Haned: Forensim – a DNA mixture interpretation tool
  - Peter Schneider.