



Update on recent activities in the ENFSI DNA working group

Ingo Bastisch

Bundeskriminalamt
Wiesbaden, Germany

Vienna, 2011



The European Network of Forensic Science Institutes

Mission Statement

ENFSI has been established with the purpose of sharing knowledge, exchanging experiences and coming to mutual agreements in the field of forensic science. ENFSI is recognized as an expert group in the field of forensic sciences.



Membership of ENFSI

- 60 members
- 34 countries





16 Expert working groups

- Digital Imaging
- DNA
- Document
- Drugs
- Explosives
- Fibres
- Fingerprint
- Firearms
- Fire and Explosive
- Forensic IT
- Forensic Speech and Audio
- Handwriting
- Marks
- Paint and Glass
- Road Accident Analysis
- Scene of Crime

ENFSI DNA Working Group



- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France (2)
- Germany (4)
- Georgia
- Greece
- Hungary
- Italy (2)
- Latvia
- Lithuania
- Macedonia, FYR
- Montenegro
- Netherlands
- Norway
- Poland (3)
- Portugal
- Republic of Ireland
- Romania
- Russia
- Serbia
- Slovak Republic
- Slovenia
- Spain (5)
- Sweden
- Switzerland (2)
- Turkey
- Ukraine
- United Kingdom (5)
- Plus regular guests from:
- Australia
- United Arab Emirates
- United States of America



Meeting Structure

- 2/yr togetherwith EDNAP
- Focus is operational and for policy making
- Five subgroups
 - Methods and interpretation (incl. EDNAP)
 - QA, QC, training and sampling
 - Database and legislation
 - Forensic biology
 - Automation and expert systems



www.enfsi.eu

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Polish forensic initiative

During the last meeting of the Law Enforcement Working Party (LEWP), held on 15 of July 2011 in Brussels, Pawel Rybicki - the ENFSI Chairman, presented main points of Polish Forensic Initiative on the vision for European Forensic Science 2020. The reception of his speech in Brussels allows one to look optimistically at the future of forensic sciences in Europe. The forthcoming months seem to promise well. In fact, they may determine future role of ENFSI in the area of forensic science in the European Union.

[Read more...](#)

New Board Members

At the Annual Meeting 2011 in Tallinn, Lourdes Puigbarraca (Spain) and Üllar Lanno (Estonia) were elected as a new board member and as the chairman designate respectively replacing Tore Olsson (Sweden) and Pawel Rybicki (Poland). Chairman designate Pawel Rybicki took over from Jan De Kinder (Belgium) as the new ENFSI chairman.

[Read more...](#)

ENFSI's ANNUAL REPORT 2010 PUBLISHED

SEARCH

ENFSI MEMBERS LOGIN

[ENFSI Members Login](#)

AGENDA

10th International Symposium on
Forensic Sciences
2011-09-27 Bratislava, Slovakia

Biennial meeting of the
Handwriting Working Group
2011-10-26 Delft, The Netherlands

EAFS 2012 congress
2012-08-20 The Hague, The
Netherlands



Organisation > working groups > DNA

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DNA

Aims and objectives

ENFSI DNA working group aims and objectives are:

- To bring together organisations actively pursuing forensic DNA analysis methods for the purpose of exchanging and disseminating information on forensic applications;
 - to discuss, share and compare forensic DNA analytical methods, protocols and research;
 - to establish forensic DNA analysis quality assurance guidelines and quality controls for Europe;
 - to co-operate with other national and international organisations in developing European standards for forensic DNA analyses;
 - to serve as a mechanism for the review and revision of European guidelines for forensic DNA analyses;
 - to establish core DNA markers for national and international criminal or intelligence DNA profile databases in Europe;
 - to disseminate to the European forensic DNA community ENFSI guidelines, forensic research results, the provision of training and any other work of benefit.
- The ENFSI DNA working group provides a forum via its regular seminars/workshops for the validation, introduction and improvement of DNA analysis in casework. It considers all aspects of case analysis and reporting. Focusing on casework requirements, the group collaborates with regard to the reporting and

SEARCH

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- [ENFSI Members Login](#)

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2011-10-26 Delft, T

EAFS 2012 congres
2012-08-20 The He
Netherlands

Available documents

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Documents

DNA database, legislative and laboratory issues

-  [ENFSI document on DNA-database management 2010](#)
(Published: 2010-04-30)
-  [ENFSI report on DNA Legislation in Europe](#)
(Published: 2008-09-19)
-  [ENFSI DNA WG Terms and Abbreviations](#)
(Published: 2008-09-19)
-  [ENFSI Report on Criminal Cases in Europe solved by ILS](#)
(Published:)
-  [ENFSI survey on DNA-databases in Europe December 2010](#)
(Published:)

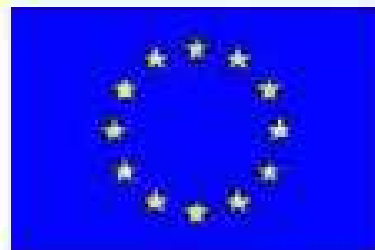
QA issues

-  [DNA contamination prevention guidelines \(version 2010\) for the file "contamination prevention final"](#)
(Published:)
-  [Minimum validation guidelines in DNA profiling \(version 2010\) for the file "Recommended minimum criteria..."](#)
(Published:)
-  [Recommendations for the training of DNA staff \(version 2010\)](#)
(Published:)



DNA-DATABASE MANAGEMENT REVIEW AND RECOMMENDATIONS

**ENFSI DNA Working Group
April 2010**



**With financial support from the ISEC Programme
European Commission - Directorate General Justice and Home Affairs**



Database document

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Database document

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ENFSI Survey on the DNA Profile Inclusion,
Removal and Retention of Member States'
Forensic DNA Database: Chris Asplen

2009



GORDON, THOMAS  HONEYWELL
GOVERNMENTAL AFFAIRS



Country	Population size	Persons				Stains	Matches			Stain-person matches per person
		A	S	CO	T		Person/Stain			
							S	CO	T	

Country	Population size	Persons				Stains	Matches						
		A	S	CO	T		Person/Stain						
							S	CO	T				
Austria	8,100,000				134,938	39,305			12,404				
Belgium	10,400,000		n/a	19,591	19,591	21237	258	1,081	1,339				
Bulgaria	7,900,000				17,618	1,147			377				
Croatia	4,600,000				29,293	5,180			3,752				
Cyprus	772,000												
Czech Republic	10,300,000												
Denmark	5,500,000				61,397	35,796			11,774				
Estonia	1,400,000				29274	9376			2860				
Finland	5,360,000				97,113	11,534			12161				
France	59,300,000	113,537	1,075,308	314,080	1,389,388	79,670	24,727	8,499	33,226				
Georgia	4,700,000												
Germany	81,835,000				692,284	176,480			79,701				
Greece	10,600,000												
Hungary	10,200,000				81,812	2,065			127				
Ireland	4,200,000												
Italy	58,000,000												
Latvia	2,400,000												
Lithuania	3 369 000				44 877	4 260							
Sweden	9 500 000		25 085	68 016	91 864	21 418	21 130	8 778	37 808	14 387	43 285	46 887	
Switzerland	7 775 000				125 288	50 358			28 248	8 282	21 488	40 213	0,22
Turkey	86 800 000												
UK (England & Wales)	53 700 000				5 212 104	375 260			1 125 548	122 588	1 258 113	40 213	0,22
Ukraine	47 800 000												
Total	770 578 000				8 093 328	903 883			4 854 216	323 480	4 887 697		



QA related documents

Contamination prevention guidelines			
DOCUMENT TYPE :	REF. CODE:	ISSUE NO:	ISSUE DATE:
POLICY	ENFSI DNA WORKING GROUP	001	November 2010

Recommended Minimum Criteria for the Validation of Various Aspects of the DNA Profiling Process			
DOCUMENT TYPE :	REF. CODE:	ISSUE NO:	ISSUE DATE:
POLICY	ENFSI DNA WORKING GROUP	001	November 2010

CONCEPT TRAINING DOCUMENT			
DOCUMENT TYPE :	REF. CODE:	ISSUE NO:	ISSUE DATE:
POLICY	ENFSI DNA WORKING GROUP	001	November 2010



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Links

ENFSI DNA WG STR Population Database:

The European Network of Forensic Science Institutes (ENFSI) conducted research projects involving collecting STR-data from 24 European populations using the AMPFLSTR SGM Plus system. In total, 5700 genetic profiles were obtained. These data - termed a population database - can be used for calculating match probabilities of genetic profiles generated in laboratories across Europe. For unlimited availability, the database has been put on the website below, which allows onsite calculation of profile frequency with different adjustment factors. ENFSI DNA WG STR Population Database: www.str-base.org/demo.php



<http://strbase.org/index.php>

ENFSI DNA WG - STR Population Database

ENFSI DNA WG STR Population Database

The European Network of Forensic Science Institutes ([ENFSI](#)) has undertaken an extensive study collecting STR-data from 24 European populations (5700 profiles) using the AMPFLSTR SGM Plus system [6], which has become one of the standard STR multiplexes to be used within Europe for the purpose of constructing national DNA criminal intelligence databases. This allele proportion (frequency) database - further referred to as the 'ENFSI DNA WG STR Population Database' - can be used to calculate match probabilities of DNA profiles from cosmopolitan Caucasian populations across all Europe, regardless of their specific country of origin.

Differences in allele proportions between populations of the different countries have been quantified by estimating F_{st} [1], showing that the effect is small (F_{st} is approximately 0.001). Nevertheless, the effect cannot simply be ignored because match probabilities of DNA profiles derived from a European database will tend to be lower than those derived from an appropriate cognate population database. In order to take account of both sampling error and population sub-structuring effects, various methods can be applied including the Balding size bias correction [2], the Balding and Nichols F_{st} correction [3], and an upper bound of a 95% confidence interval [4], which are summarized among others in a recent publication [5].

The task of this website is to make the ENFSI DNA WG STR Population Database generally



STR-Base

- STR-Base will in 2011/2012
- New population data will be included as a result of the introduction of the new European Standard Set of Loci
- Movement to new hardware environment and some software adjustments



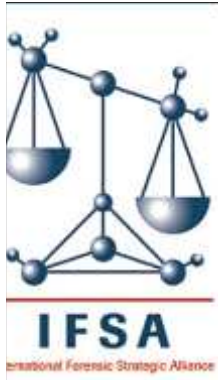
ESS

- Of course you know...
- Population data analysis of 25 populations did not show any major inconsistencies
- Some discordances detected between different kits but nothing that caused concerns



Participating labs

LAB ID	No. of samples	NGM	ESX-16	ESX-17	ESI-16	ES-I17	ESSplex	No. of kits used*
1 ^{III}	257/220			x				1
2	206	x						1
3	142	x				x		2 [‡]
4	151	x				x	x	3 [‡]
5	45	x			x		x	3 [‡]
6	331			x		x		2 [‡]
7	247					x		1
8	202	x		x		x		3 [‡]
10	200	x						1
11	132	x		x		x		3 [‡]
12	200	x		x		x		3 [‡]
13	206	x			x			2 [‡]
14	217/224	x				x		2 [‡]
17	200					x		1
18	202	x			x			2 [‡]
20	208	x	x					2 [‡]
22 ^{III}	210	x		x		x	x	4
23	304	x	x					2 [‡]
25	200			x		x		2 [‡]
26	284	x		x			x	3 [‡]
27	425		x					1
32	207	x						1
33 ^{III}	208					x		1
34 ^{III}	171			x				1
35	200	x		x		x		3 [‡]
36	104				x			1



International Forensic Strategic Alliance (IFSA)



European Network of Forensic Science Institutes

European Network of Forensic Science Institutes (ENFSI)



The American Society of Crime Laboratory Directors

"Excellence Through Leadership in Forensic Science Management"

The American Society of crime Laboratory Directors (ASCLAD)

ASIAN FORENSIC SCIENCES NETWORK



Asian Forensic Science Network (AFSN)



ACADEMIA IBEROAMERICANA DE CRIMINALÍSTICA Y ESTUDIOS FORENSES

Unidad está en : Página principal AICEF

Academia Iberoamericana de Criminalística y Estudios Forenses (AICEF)



Welcome to SMANZFL

Senior Managers of Australian and New Zealand Forensic Laboratories

To provide Leadership in the forensic sciences in the pursuit of excellence

Senior Managers of Australian and New Zealand Forensic Laboratories (SMANZFL)



ISO-Standard

- Please visit P355 „The Future of Forensic Science Standards“ by Linzi Wilson-Wilde et al.
- Aim: Publish specification for products used in the forensic (DNA) chain in order to ensure that products will be as DNA free as possible



ISO-Standard

- Following up on the occurrence of manufacturing based contaminations (e.g. German Phantom)
- Using IFSA intl. Group was meeting for preparation of a proposal that will be published soon at ISO.
- Goal is to have the process finished in ~1yr.



Future

- Database document continuously expanded
- Cooperation with ICMP regarding establishment of databases for known contaminants and manufacturer samples
- Extending population data (country and subpopulation)
- More training esp. Interpretation & statistics



Future

- Interpretation will be one of main topics
- More looking at mtDNA
- Exchanging experiences and ideas
- Continue cooperation with manufacturers
- Develop and publish recommendations where appropriate



Bundeskriminalamt



Ingo Bastisch

BKA (Federal Criminal Police Office)

, ingo.bastisch@bka.bund.de

(+49 611 55-16030