NATIONAL COMMISSION FOR THE FORENSIC USE OF DNA

ACTIVITIES 2015

GOBIERNO DE ESPAÑA
MINISTERIO DE JUSTICIA

NATIONAL COMMISSION FOR THE FORENSIC USE OF DNA

ACTIVITIES 2015

CNUFADN Secretariat
National Institute of Toxicology and Forensic Sciences.
José Echegaray 4
28232 Las Rozas. Madrid.

Website:
http://institutodetoxicologia.justicia.es/wps/portal/intcf_internet/portada/utilidades_portal/comision_ADN/

Front page watermark:
National Institute of Toxicology and Forensic Sciences. Madrid Department.
Headquarters of the National Commission for the Forensic use of DNA.

Watermark in the body of the document:
Chromosome and DNA Molecule
Source: Office of Biological and Environmental Research of the US Department of Energy, Office of Science, science.energy.gov/ber/. Drawn up by: The Biological and Environmental Research Information System, Oak Ridge National Laboratory. genomicscience.energy.gov/ and genomics.energy.gov/

Edita:
Ministerio de Justicia. Secretaría General Técnica.

Maquetación:
Subdirección General de Documentación y Publicaciones

NIPO:
051-15-043-3

ISSN:
2530-3104

PRESENTATION

One aspect of particular emphasis for CNUFADN actions concerns the need to ensure all DNA related actions adhere both to the legal framework for the sector, and also to the legislation of each jurisdiction. This has required constant review of action protocols, drafting of recommendations and establishing basic principles for coordinating the various public or private, national or international institutions.

For that reason, CNUFADN, through the plenary body and workgroups, puts considerable effort into drafting and reviewing a variety of documents that will be used en masse in many instances. One example of this is the informed consent forms used to obtain victim profiles and which have been revised into a single format that can be used by all police forces whilst providing victims with the maximum guarantees. CNUFADN also recommends that expert reports and the expression of results in forensic genetics analyses be drafted with minimum, structured, sufficient and reliable content.

A clear example of the need to adapt to legislation came about upon enactment of legislation on child and youth protection, and also when the Central Sexual Offender Register was established and regulated in Royal Decree 1110/2015, of 11 December. As a result of the aforesaid legislation, CNUFADN had to consider ways to coordinate the Register and DNA databases.

Equally, and no less essentially, CNUFADN tasks include drafting proposals to amend legislation and to ensure legislation is duly adapted to the needs of the day and to scientific advances. In this regard, several legislative amendments have been issued as a result of the work carried out in recent years by the Commission and will undoubtedly play their part in improving application of that law to the forensic sciences, implying a significant advance for prosecution of offences. One of the cited legislative reforms has meant that convicted offender profiles can now be included on DNA database, pursuant to new section 129 bis of the Spanish Criminal Code. Convicted offender profiles had, up until now, been omitted from existing legislation. Another example of amended legislation has to do with the possibility of collecting DNA samples from persons under arrest and even against their will, whenever authorised by a judge and as long as the legal principle of minimum intervention and proportionality of coercive measures to the circumstances of each case are adhered to, as well as respect for human dignity.

Additionally, there has been no end of astonishing scientific advances and achievements in genetic sciences with possible applications to the forensic sciences. This has highlighted the paramount importance 1) of remaining at the cutting-edge of both national and international techniques and procedures, duly applying those advances and achievements to Spanish methodology; 2) of being informed about research projects and 3) of supporting and driving initiatives within the framework of CNUFADN functions and competences. The activities presented here, carried out by CNUFADN throughout this year 2015, clearly support this and highlight the dedication and interest of CNUFADN members in making maximum contributions to developing DNA use for forensic purposes.

CONTENTS

1. NATIONAL COMMISSION FOR THE FORENSIC USE OF DNA

1.2. INTRODUCTION

1.2. COMPOSITION

1.3. FUNCTIONS

1.4. LOGISTICAL SUPPORT

1.5. PLENARY BODY ACTIVITIES

2. LEGAL AND BIOETHICS GROUP

2.1 PLENARY CONSTITUTION RESOLUTION

2.2 REGULATIONS

2.3 COMPONENTS (COORDINATOR, MEMBERS AND CONTRIBUTORS)

2.4 GROUP ACTIVITIES: DISCUSSIONS AND CONCLUSIONS

2.4.1 INFORMED CONSENT FORMS FOR OBTAINING VICTIM PROFILES

2.4.2 SEXUAL OFFENDERS DNA PROFILE REGISTER

2.4.3 REVIEW OF RECENT DNA RELATED LEGAL REFORMS

2.4.4 REVIEW OF THE COMSIGENI FRAMEWORK DOCUMENT. TECHNICAL PROCEDURES MANUAL.

2.4.5 STANDING TECHNICAL COMMITTEE RECOMMENDATIONS ON DRAFTING EXPERT REPORTS AND SETTING OUT FORENSIC GENETICS ANALYSIS RELATED RESULTS

2.4.6 JURISPRUDENCE DATABASE

3. THE STANDING TECHNICAL COMMITTEE

3.1 MEMBERS AND ACTIVITIES

3.2 SIXTH ANNUAL EVALUATION OF FORENSIC GENETICS LABORATORIES IN RELATION TO QUALITY ASSURANCE AND ACCREDITATION

3.3 APPROVAL OF A RECOMMENDATIONS DOCUMENT REGARDING THE CONTENT AND STRUCTURE OF EXPERT GENETIC FORENSIC REPORTS

3.4 DISCUSSION OF OBSERVATIONS ON ISO DIS 18385 STANDARD AND VOTING INDICATIONS AS REPRESENTATIVES OF THE TECHNICAL STANDARDS COMMITTEE AEN/CTN 197 GT4

3.5 DNA CONTAMINATION

3.6 POST-CUSTODY OF DNA SAMPLES

3.7 NEW DNA TECHNOLOGIES AND NEW DNA MARKERS

3.8 PRESENTATION OF THE DNA-STR MASSIVE SEQUENCING & INTERNATIONAL INFORMATION EXCHANGE PROJECT (DNASEQEX: HOME/2014/ISFP/AG/LAWX/4000007135) FINANCED BY THE *INTERNAL EUROPEAN COMMISSION POLICE SECURITY FUNDING PROGRAMME*

4. APPENDICES: APPROVED RESOLUTIONS AND DOCUMENTS

4.1 APPENDIX I: LIST OF LABORATORIES WHICH MEET THE CNUFADN RESOLUTION ON ACCREDITATION AND QUALITY CONTROL

4.2 APPENDIX II: RECOMMENDATIONS APPLICABLE TO EXPERT REPORTS AND FOR PRESENTING RESULTS IN FORENSIC GENETICS ANALYSES

1. NATIONAL COMMISSION FOR THE FORENSIC USE OF DNA

1.1 INTRODUCTION

This year the Standing Technical Committee again established one-off accreditation, duly approved by the National Commission Plenary body, of laboratories which meet applicable requirements for forensic related DNA analysis. A record of that accreditation can be found on the Internet portal of the National Commission for the Forensic Use of DNA, accessible through the Justice Administration Internet Portal *(https://www.administraciondejusticia.gob.es).*

The Legal and Bioethics Group has continued to work on several legislative proposals, such as: 1) recording genetic profiles of convicted child abuse offenders, 2) scenarios when children reach the age of majority, and 3) amended National Commission composition to include additional members.

For its part, the Standing Technical Committee carried out reviews and has submitted proposals and reports to the National Commission Plenary body on various scientific and technical matters concerning aspects such as minimising the likelihood of sample contamination, storage and post-custody of DNA samples and profiles, as well as evaluating the inclusion of new genetic markers, *inter alia*.

1.2 COMPOSITION

The National Commission for the Forensic Use of DNA acts through the Plenary body and the Standing Technical Committee.

The Plenary Body comprises the Chair, position held by the incumbent head of the Department that liaises with the Justice Administration[1], two Deputy Chairs: the designated Director, National Institute of Toxicology and Forensic Sciences and a representative from the State Security Secretariat, as appointed by the current incumbent, together with plenary body members. The plenary members comprise as follows: a Judicial Career professional, a public prosecutor, representatives from the National Toxicology and Forensic Sciences, from the Forensic Police[2], from the Civil Guard Judicial Police Department[3] , as well as from autonomous community police authorities that have DNA laboratories included on the police DNA marker database, together with bioethics and genetics experts.

The Plenary body meets at least once in three months or as necessary to carry out its tasks.

The Standing Technical Committee is chaired by the Director of the National Institute of Toxicology and Forensic Sciences and also comprises representatives from Security forces laboratories, as well as an expert from the Institute who acts as Secretary to the Committee.

[1] Dirección General de Relaciones con la Administración de Justicia
[2] Comisaría General de Policía Científica
[3] Jefatura de Policía Judicial de la Guardia Civil

The Committee operating rules were established by Resolution of 21 July 2009, and the same resolution laid down the basis for creating various working groups according to areas of competence, with a view to rendering the Committee more agile and effective. A technical scientific group, a DNA database organisation and administration group and a legal and bioethics group were duly constituted.

The first two groups act in tandem and form part of the Standing Technical Committee, given their common scientific and technical natures and interrelated subject areas. The Committee is chaired by the Director of the National Institute of Toxicology and Forensic Sciences. The legal and bioethics group, however, acts independently and is supported by the coordinator, who is also the group Secretary and liaises with both the Standing Technical Committee and the Plenary body.

In view of the complex material scope of the National Commission for the Forensic Use of DNA remit, with implicit specialist scientific and technical areas, the listed Commission members can now be joined by staff from laboratories providing DNA analysis for criminal investigation purposes or for identification of missing persons and also by staff from DNA databases, who may all act as collaborators and advisers.

MEMBERS OF THE PLENARY BODY OF THE NATIONAL COMMISSION FOR THE FORENSIC USE OF DNA

CHAIR
Ricardo G Conde Díez
General Manager, Justice Administration liaison

DEPUTY CHAIRS
Gloria Vallejo de Torres
Director, National Institute of Toxicology and Forensic Sciences

Francisco J Vidal y Delgado Roig
Advisory Member, State Security Secretariat. Ministry of Interior.

MEMBER and SECRETARY

Antonio Alonso Alonso
Practitioner from the Biology Service, Madrid Department, National Institute of Toxicology and Forensic Sciences

MEMBERS

INCUMBENT JUDGE
Ignacio Acón Ortego
Judge

INCUMBENT PUBLIC PROSECUTOR
Noelia González Garrote
Public Prosecutor

DEPUTY PUBLIC PROSECUTOR
Cristina Martínez Arrieta Márquez de Prado
Public Prosecutor

INCUMBENT BIOETHICS EXPERT
María Casado González
Titular Professor, Philosophy of Law. Barcelona University

DEPUTY BIOETHICS EXPERT
Margarita Guillen Vázquez
Judge

INCUMBENT GENETICS EXPERT
Pilar Madero
Managing Director, Genetics Analysis Centre

DEPUTY GENETICS EXPERT
Rafael Camacho
Spanish Foundation for Science and Technology[4]

INCUMBENT MEDICAL GENETICS AND MOLECULAR PATHOLOGY EXPERT, NATIONAL HEALTH SYSTEM
José Antonio Lorente Acosta
Granada University, Genetic Identification Laboratory

DEPUTY MEDICAL GENETICS AND MOLECULAR PATHOLOGY EXPERT, NATIONAL HEALTH SYSTEM
Ángel Carracedo Álvarez
Director, Santiago de Compostela Forensic Medicine University Institute

INCUMBENT CORONER
Carmen Conejero Guillén
Coroner for the Toxicology Information Service, National Institute of Toxicology and Forensic Sciences

DEPUTY CORONER
José Luis de Miguel Pedrero
Toxicology Information Service, Madrid Department, National Institute of Toxicology and Forensic Sciences

INCUMBENT OFFICIAL ATTACHED TO THE SPANISH FORENSIC POLICE DEPARTMENT LABORATORIES
María Pilar Allúe Blasco
Spanish Forensic Police Department

Gemma Barroso Villarreal
Head of Central Unit for Scientific Analyses, Spanish Forensic Police Department

INCUMBENT OFFICIAL FROM THE CIVIL GUARD JUDICIAL POLICE HEADQUARTERS
José Antonio Berrocal Anaya
Head of Forensic Science Service, Judicial Police Headquarters

[4] http://www.fecyt.es/en

ERTZAINZA[5] REPRESENTATIVE
José María Yurrebaso
Chief Commissioner, Ertzainza Forensic Police

MOSSOS D´ESQUADRA[6] REPRESENTATIVE
Mª Lourdes Puigbarraca
Department Head, Mossos d´Esquadra Forensic Police

Daniel Martínez Ortega
Assistant Head, Mossos d'Esquadra Forensic Police Department

GUEST EXPERTS
Alejandra Frías López
Judge. Ministry of Justice Adviser

José Miguel de la Rosa Cortina
Deputy Prosecutor, Technical Secretariat, Public Prosecution Service

Juan Manuel Fernández Martínez
Judge, General Council of the Judiciary representative

Javier Bueno Ocáriz
Scientific Police Department Head, Navarre Police representative

José Andradas Herranz
DNA Database Manager. Security Secretariat, Ministry of Interior

1.3 FUNCTIONS

The National Commission for the Forensic Use of DNA has executive and advisory functions on matters within its remit. The executive role of the Commission in relation to laboratories is particularly important, along with DNA samples action protocols.

The National Commission is particularly charged with the following functions:

- Accreditation of laboratories authorised to compare genetic profiles in the course of investigation and prosecution of criminal offences, identification of corpses and missing persons enquiries. The Commission furthermore evaluates compliance and establishes official quality controls to which such laboratories must regularly submit.

- Establishing the basis for coordination between the aforementioned laboratories, as well as reviewing all scientific and technical, organisational, ethical and legal aspects in order to ensure that laboratories forming part of the DNA markers Police Database operate properly.

- Drafting and approval of official technical protocols for taking, custody and analysis of samples.

- Deciding security conditions for custody of data and establishing all measures as required to guarantee strict confidentiality and secrecy of samples, analyses and data obtained from the latter, in accordance with the law.

[5] Basque country police force
[6] Catalonia police force

Advisory functions include the Commission drawing up proposals to present to the Ministries of Justice and Interior, whenever the Commission deems this necessary for the effective investigation and prosecution of criminal offences and identification of corpses.

Additionally, another role of the Commission is cooperation liaison with entities of third party States with responsibility for DNA analysis, for investigation purposes and for prosecution of criminal offences and identification of human remains or missing person enquiries. The Commission role is without prejudice to actions corresponding to the Ministries of Justice and Interior in this regard.

Along the same line of cooperation, the Commission can propose Conventions with other entities to facilitate accreditation procedures and for co-operation with laboratories that are not listed on the police DNA marker database.

The last point to mention is that the Commission draws up the annual report that is subsequently forwarded to the Ministries of Justice and Interior. Also, the Commission drafts and approves standards and internal action protocols for carrying out tasks that fall within the Commission remit.

1.4 LOGISTICAL SUPPORT

Given the eminently technical and scientific nature of CNUFADN functions, and in recognition of the experience and renown of the National Institute of Toxicology and Forensic Sciences, which serves as reference centre for forensic genetic sciences, Royal Decree 1977/2008, of 28 November, has placed the Commission at the centre of its sphere of action. Thus, the RD Sole Additional Provision establishes that the Institute shall provide human and material resources as necessary for the Commission to carry out its remit. This support role involves regular meetings of working groups at the Institute headquarters in Madrid, such as have been held regularly throughout this year 2014. [TR. This report is “2015 Activities”]

At present, the Internet Portal for the National Institute of Toxicology and Forensic Science, including the Commission, forms part of the Justice Administration Portal. Resolutions and documents drafted and approved by the Commission plenary body and other useful Commission related data are therefore published and available to interested parties on the following website: *https://www.administraciondejusticia.gob.es/*.

1.5 PLENARY BODY ACTIVITIES

The plenary body of the National Commission for the forensic use of DNA approves resolution and decides on issues brought before the plenary body by the Standing Technical Committee and the Legal and Bioethics Group.

The plenary body Chair liaises with State Administration and Autonomous Community bodies, as well as with other public or private bodies the Commission contracts in pursuit of the Commission remit.

Throughout this year 2015 the Commission plenary body held sessions on the following dates, and duly discussed and approved the various issues mainly put forward by the relevant working groups:

— Session Eighteen was held on 29 April 2015 and the following issues were discussed:

- The Plenary body proposes to continue work on drafting a standard format for obtaining informed consent to collect samples and profiles from victims, seeking consensus from the various institutions. This will be presented at the next plenary session.

- The proposal put forward by the Santiago de Compostela University Institute of Forensic Medicine on inclusion of profiles into DNA databases, was unanimously approved by the plenary body. The need was highlighted, in this regard, to ensure that the relevant data Files for criminal investigation purposes and for identifying missing persons, duly comply with data protection legislation. It was furthermore agreed to establish a Co-operation Agreement with certain SIGENI institutions, given that the low number of annual profiles might not justify installing a CODIS Local Server within the aforesaid institution (recommendation to establish an agreement with the Ministry of Interior for the Database Administrator at the State Security Secretariat to record profiles)".

- The Plenary body unanimously agreed the DNA Database Administrator should be informed of the amendments to the Penal Code brought in by Organic Law 1/2015, of 30 March, so that the latter can take steps to effectively record on the DNA databases, as from July 2015, DNA profiles of offenders convicted of serious offences threatening life, against the integrity of persons, against freedoms, against sexual freedom or indemnity, terrorism offences and any other serious crime involving a serious risk to life, to health or to the physical well-being of persons. This would be subject to request by judges and tribunals. Crimes against sexual indemnity must be recorded using a differentiating code.

- Information was provided on other matters dealt with by the Legal and Bioethics Group at the session held on 19 February 2015: Legal reforms in hand, the Jurisprudence Database, Proposal for Crime Identification Codes for recording on the DNA Database, Resolution of the non-jurisdictional Plenary body in Division Two, Supreme Court, on obtaining samples from arrested persons and Training Courses.

- The Standardisation Technical Committee AEN/CTN 197 GT4 was constituted as part of the Standing Technical Committee of the National Commission for the Forensic Use of DNA (CNUFADN) to continue monitoring the work of the ISO/P272 committee and evaluate the draft document for the future ISO standard 18385 (Minimizing the risk of human DNA contamination in products used to collect, store and analyze biological material for forensic purpose). Comments on ISO standard 18385 were also recorded.

- Documents and procedures were submitted regarding handling, custody chain and post custody as implemented in the various institutions reviewed and debated by the Standing Technical Committee. It was unanimously approved to transfer this issue to the Legal and Bioethics Group for ongoing work.

- The period for forensic genetics laboratories in Spain to forward documents to CNUFADN for accreditation and quality assurance purposes for the annual assessment was opened, setting the deadline as 30/05/2015.

- INTCF[7] submitted a request in relation to a new European project (European Commission ISFP[8] Programme) on DNA SGR Massively Parallel Sequencing markers. It was deemed necessary to debate the various ethical and legal difficulties that may arise in applying this new technology.

— Session Eighteen was held on 27 October 2015 and the following issues were discussed:

- The Commission was notified of publication in the Spanish Official Gazette dated 6/10/2015 of Royal Decree 851/2015, 28 September, amending Royal Decree 1977/2008, of 28 November, on regulation of the composition and functions of the National Commission for the forensic use of DNA. The sole section sets out the new composition of CNUFADN, as well as the possibility of seeking advice from and the cooperation of other experts.

- The need to create communication mechanisms between the recently established Sex Offenders Register and the DNA databases was put to the Commission.

- The Commission considered scenarios when informed consent would be needed for taking DNA samples from victims and whether a single standard format might be used.

- The difficulties that arise in relation to custody of DNA samples given the lack of specific regulation were discussed: possible reform of Law 10/2007 to regulate storage of DNA samples and a consensus on joint action protocol to be agreed by all laboratories.

- Presentation of certification data obtained in 2014 and the accreditation status of each laboratory.

- Approval of the 2015 list of laboratories that comply with the Agreement on Accreditation and Quality Assurance (CNUFADN plenary session of 21/07/2009).

[7] Instituto Nacional de Toxicología y Ciencias Forenses

[8] Internal Security Fund - Police

2. LEGAL AND BIOETHICS GROUP

2.1 PLENARY CONSTITUTION RESOLUTION

The proposal was put forward at the Plenary meeting held on 27 March 2009, to organise the Commission and the Plenary body, as well as the Technical Committee established in RD 1977/2008, into three working groups. One group would deal with technical-scientific issues, another with DNA database organisation and management, whilst the third would look at legal and bioethical aspects. The first two working groups would form part of the Technical Committee and the third would be a separate body, under a specific regulation established by means of the internal implementation rules authorised in Section 3.i, RD 1977/2008.

The next Plenary meeting held on 21 July 2009 approved the Commission internal implementation and operating rules for working groups. Article 1 structures the Commission into the three aforementioned working groups. The first two working groups form part of the Technical Committee and it was established that the Legal and Bioethics Group would comprise the Judge, the Public Prosecutor and the bioethics expert, who would be sitting members (Article. 2). The other members of the Legal and Bioethics group comprise persons that express an interest, of their own initiative, in cooperating with the group or whose attendance is sought either by the Technical Committee or by the Legal and Bioethics Group Coordinator and without prejudice to cooperation and advice as established in Article 7 of the same Royal Decree, which refers to cooperation from personnel attached either to the various DNA analysis laboratories for criminal investigation and identification of missing persons, or attached to DNA databases.

2.2 REGULATIONS

The Legal and Bioethics Group internal regime is established in the internal rules approved during the Plenary body session held on 21 July 2009, as already mentioned above. The following points are duly highlighted:

Section 4 of Article 2 provides that each member may exercise their functions through appointed external advisers. Advisers appointed by Legal and Bioethics Group members shall not acquire entitlements from the Commission, but the latter must be informed of the appointments as a matter of record.

The functions of the Legal and Bioethics Group are established in Article 3.2, Commission Internal Rules, which regulate the functions of the legal and bioethics group: evaluation of ethical and legal criteria that must be taken into account for the functions described in the previous section and, particularly, for obtaining samples, with regard to the subject and to the classification of offences, for the use of DNA profiles on databases and for conservation and elimination of data.

Article 4 provides that the Legal and Bioethics working group will appoint a coordinator to act as group secretary and to liaise with the Standing Technical Committee and the Plenary body. The Legal and Bioethics working group is additionally authorised to establish preparatory relationships with persons having responsibility in this area within entities of other responsible States.

As regards the Legal and Bioethics working group modus operandi, Article 5.1, paragraph two, states that each group shall meet as often as decided by the component members, as required for the work to be carried out. The group coordinator will convene group meetings and include an agenda as part of the notification, providing at least ten days' notice unless the coordinator

decides that an urgent meeting must be held. Minutes will be taken of Legal and Bioethics working group resolutions. Resolutions shall be adopted by simple majority of group members. 2. [TR. number?] The provisions of Title II Chapter II of Law 30/1992, 26 November, on the Legal System applicable to Public Administrations and Common Administrative Procedure, shall apply to all matters not regulated in the agreement.

Lastly, Article 6 establishes that the working groups shall receive the support of the National Institute Toxicology and Forensic Sciences, which will provide human and material resources as necessary for the working groups to effectively carry out their functions. The Internal Rules came into force on 22 July 2009.

2.3 COMPOSITION (COORDINATOR, COMMISSION MEMBERS AND COLLABORATORS)

The following were members of the Groups for 2015:

MEMBERS COORDINATOR -GROUP SECRETARY
Ignacio Acón Ortego
Judge

SITTING MEMBERS
Noelia González Garrote
Public Prosecutor

María Casado González
Titular Professor, Philosophy of Law. Barcelona University

Carmen Conejero Guillén
Coroner at the Instituto Nacional de Toxicología y Ciencias Forenses

COMMISSION SECRETARY AND MEMBER
Antonio Alonso Alonso
Practitioner at the Biology Service, Madrid Department, Instituto Nacional de Toxicología y de Ciencias Forenses

ADVISERS AND COLLABORATORS:
FOR THE SECURITY SECRETARIAT, MINISTRY OF INTERIOR
José Andradas Heranz
DNA Databases Administrator

FOR THE POLICE LABORATORIES, NATIONAL POLICE
Gemma Barroso Villareal
Forensic Science General Commissariat

Pedro Sogo Sánchez
Forensic Science General Commissariat

FOR THE CIVIL GUARD FORENSIC LABORATORIES
José Mª de las Cuevas Carretero
Civil Guard Judicial Police

FOR THE FORENSIC LABORATORIES OF THE MOSSOS D´ESQUADRA
Mª. Pau Martí González
Manager, Criminal Matters, Judicial Assessment Service, Police Directorate General

FOR THE ERTZAINTZA FORENSIC LABORATORIES
Jokin Alfageme García
Ertzaintza Forensic Police

AS PROPOSED BY MEMBER Ms. MARÍA CASADO GONZÁLEZ
Margarita Guillén Vázquez
Judge and Professor at Santiago de Compostela University

AS PROPOSED BY THE GENERAL BAR ASSOCIATION
Juan Mejica
Lawyer

2.4 GROUP ACTIVITY: DEBATES AND CONCLUSIONS

Two meetings of the Legal and Bioethics Group were held in 2015, with the following minutes duly approved:

- Minutes of the session held on 19/02/2015
- Minutes of the session held on 30/09/2015

The most significant issues dealt with by the Group are as follows:

1. Informed consent forms for obtaining victim profiles.
2. Sex offenders DNA profile register.
3. Review of recent DNA related legal reforms.
4. Review of COMSIGENI Framework Document. Technical Procedures Manual.
5. STC[9] recommendations on expert reports and presenting results in relation to forensic genetics analyses.
6. Jurisprudence Database.

2.4.1 INFORMED CONSENT FORMS FOR OBTAINING VICTIM PROFILES.

The Legal and Bioethics Group reviewed forms used to obtain the informed consent of victims providing DNA samples, with a view to drafting a standard format for use by all police forces.

The Group agreed to follow the recommendations adopted at the previous September 2014 meeting on drafting the standard format:

[9] CNUFADN Standing Technical Committee

- 1. Victim DNA profiles may only be obtained and recorded in the database with the prior informed consent of the person concerned.
- 2. There must be differentiated processing of victim DNA profiles within databases. Comparisons with remains must be carried out separately.
- 3. Victim DNA profiles may not, in any event, be used as evidence to incriminate the victim concerned.
- 4. Special attention must be given to removal of victim DNA profiles from the database: cancellation at all events whenever requested by the victim personally; and also when it is no longer necessary to keep the victim DNA profile on the database due to no further requirement for investigation purposes.

Nevertheless, the Legal and Bioethics Group considered that it may be appropriate with regard to point 4 not to automatically eliminate victim DNA profiles merely upon request by the victim, as it may be necessary to keep the profiles for criminal investigation purposes. Each specific instance should be weighed up on its own merit and, as the case may be, decided by a judicial authority.

The Legal and Bioethics Group concluded that the end purpose of taking samples should be more clearly recorded, duly differentiating two scenarios:

- 1. The ordinary or usual scenario: instances when samples are just taken to perform an analysis for direct comparison with remains. This would not require the genetic profile obtained from the victim to be included into the database.
- 2. Exceptional scenarios: when it is necessary to include the victim genetic profile into the database for investigation purposes.

The Group agreed to draft a standard format setting out the two possibilities on a single form, differentiating each scenario to ensure the victim is duly informed and able to consent to each of the required scenarios.

2.4.2 SEXUAL OFFENDERS DNA PROFILE REGISTER.

Royal Decree 1110/2015, of 11 December, establishes and regulates the Sexual Offenders Central Register implementing Law 26/2015, of 28 July, on Amending the Child and Youth protection system.

Pursuant to Article 37 of the Council of Europe Convention on Protection of Children against Sexual Exploitation and Sexual Abuse, of 25 October 2007 (the “Lanzarote Convention”), the RD provides that data on identity and genetic (DNA) profile of persons convicted of the offences to which the Register refers must be included on the Sexual Offenders Central Register together with the other criminal record details from the Central Criminal Record and the Central Register of Judgments confirming Criminal Liability of Minors. The Ministry of Interior, in that regard and as party responsible for the National DNA Database, shall act as interlocutor for including the genetic profile identification code of the convicted offender, and also for communicating elimination of entries on the Sexual Offender Central Register to ensure the corresponding genetic profile can be eliminated as established in Organic Law 10/2007,8 October, which regulates the police DNA marker database.

The Legal and Bioethics Group supported the idea of establishing the aforesaid Register and including the DNA profiles, but nevertheless insisted that two-way communication mechanisms should be put in place to ensure the Sexual Offender Register is alerted when DNA profiles are effectively recorded in the database and, equally, that the database is alerted of cancelled criminal records that require elimination of the related genetic profiles.

2.4.3 REVIEW OF RECENT DNA RELATED LEGAL REFORMS

The Legal and Bioethics Group reviewed recent DNA related legal reforms:

- a) Firstly, the reform brought in by Organic Law 1/2015, of 30 March, amending the Spanish Criminal Code - Organic Law 10/1995, of 23 November.

  This reform introduces the possibility of including convicted offenders profiles in the DNA database, under new Section 129 bis Spanish Criminal Code:

  "Whenever it is deemed that there is a relevant danger of reoffending, based on the particular circumstances of the event, background, personality assessment or any other information available in the case of offenders convicted of serious crimes threatening life, against the integrity of persons, against freedoms, against sexual freedom or indemnity, terrorism offences and any other serious crime involving a serious risk to life, to the health or to the well-being of persons, the judge or court may order biological samples to be taken from the person concerned, and analysis to be carried out to obtain DNA markers for recording on the police database. Only analyses as necessary to obtain DNA markers that exclusively provide genetic information revealing the identity of the person and their gender may be carried out.

  If the subject concerned opposes collection of the DNA sample tissue, the order may be compulsorily enforced using the minimum and indispensable coercive measures to achieve enforcement and such measures must, in all instances, be proportionate to the circumstances of the case and must respect the dignity of the subject."

- b) Secondly, Organic Law 13/2015, of 5 October, amending the Spanish Criminal Procedure Act.

  This reform introduces the following legal provision as part of the right of the arrested person to legal counsel:

  "If a person that has been arrested refuses to allow mouth saliva samples to be taken, as established in Organic Law 10/2007, of 8 October, governing the police DNA marker database, the investigating judge may, when so requested by the Judicial Police or by the Public Prosecution Service, order said official step be enforced using minimum indispensable coercive measures. The measures used must, furthermore, be proportionate to the circumstances of the case and must respect the dignity of the subject."

2.4.4 REVIEW OF THE COMSIGENI FRAMEWORK DOCUMENT. TECHNICAL PROCEDURES MANUAL

The DNA database Administrator presented juridical corrections to the Group in relation to the COMSIGENI Framework Document, particularly comprising the identification codes used in the Technical Procedures Manual. Identification codes are used to provide minimum CODIS data on the classification of the particular offence corresponding to each genetic profile.

The Legal and Bioethics Group made specific suggestions and recommendations for evaluation and inclusion, as the case may be, by COMSIGENI into the Technical Procedures Manual. Particular mention was made that it would be appropriate to include a specific Code to identify offences against the sexual indemnity of minors. It was nevertheless made clear that proposals are put forward by the Group as mere suggestions and that the Legal and Bioethics Group does not wish to hinder the essential end purpose of the codes, i.e. identification of profiles for organisational and criminal investigation purposes.

2.4.5 STANDING TECHNICAL COMMITTEE RECOMMENDATIONS ON DRAFTING EXPERT REPORTS AND SETTING OUT FORENSIC GENETICS ANALYSIS RELATED RESULTS

The Legal and Bioethics group reviewed the juridical corrections set out in the Standing Technical Committee recommendations on expert reports and on presenting results in forensic genetics analyses.

The Legal and Bioethics Group considered the Standing Technical Committee document of great value. Some small formal corrections were proposed for greater clarity and the document was then endorsed by the Group for forwarding to the Plenary body and for final approval.

2.4.6 JURISPRUDENCE DATABASE

The Legal and Bioethics Group agreed to include the jurisprudence review drafted by Supreme Court Public Prosecutor, Mr. Javier Huete Nogueras, onto the CNUFADN website. Mr. Javier Huete Nogueras voluntarily assigned the review, for no personal recompense, to the Commission so that the document is available for consultation purposes.

3. STANDING TECHNICAL COMMITTEE

The Standing Technical Committee was constituted within the National Commission for the Forensic Use of DNA, to propose criteria applicable to scientific and technical investigation. The STC is also responsible for presenting proposals to the National Commission on criteria related to the Commission functions established in Section 3.a) on accreditation of laboratories and specifically on establishing accreditation systems and official quality assurance checks to which all laboratories involved in DNA analysis for providing genetic profiles from DNA markers for inclusion in the police database are subject.

The Standing Technical Committee is chaired by the Director of the National Institute of Toxicology and Forensic Sciences and comprises representatives from the security forces laboratories, together with an expert practitioner appointed by the National Institute of Toxicology and Forensic Sciences, who also acts as Secretary.

Furthermore, the CNUFADN resolution approving the internal regulations and operating rules for working groups (approved at the Plenary meeting held on 21/07/2009) set up three working groups to cover the three lines of Commission activities: one working group dealing with technical-scientific issues, another with DNA database organisation and management, and the third working group on legal and bioethical aspects.

In so far as the first two working groups, given their scientific and technical nature and the significant overlapping of activities, it was decided they should work in tandem within the scope of the Standing Technical Committee.

The scientific/technical working group and the DNA database organisation and administration group functions involve all matters related to taking biological samples, accreditation of laboratories, genetic markers and profiles, as well as organisation and management criteria, security and evaluation of the effectiveness of the DNA database. They also handle cooperation liaison with entities of third party States with responsibility for DNA analysis, for investigation purposes and for prosecution of criminal offences and identification of human remains or missing person enquiries. The basis for this is established in Section 3. a), b), c), d) and e) of the Royal Decree that governs CNUFADN composition and functions.

3.1 MEMBERS AND ACTIVITIES

FORENSIC POLICE SERVICE
Pedro Sogo Sánchez
Head of the Analytical Coordination Service, Central Scientific Analysis Unit

Elena Rivas Martin
Emilio García Poveda
Raquel Gallardo Puente
DNA Laboratory of the Forensic Police Service

CENTRAL CRIMINOLOGY LABORATORY OF THE CIVIL GUARD
José Juan Fernández Serrano
David Parra Pecharromán
Carlos Manuel López Cubria
Jesús Martínez Gómez
Biology Department - DNA Laboratory

ERTZAINTZA FORENSIC POLICE UNIT
Oscar García Fernández
Expert practitioner with the Forensic Genetics Division, Forensic Police Unit, Ertzaintza

FORENSIC POLICE DIVISION OF THE MOSSOS D´ESQUADRA
Josep Carreras Carbonell
Maria José Jiménez Pleguezuelos
Alejandro Barros Manuel
Central Unit, Biology Laboratory

NATIONAL INSTITUTE OF TOXICOLOGY AND FORENSIC SCIENCES
Gloria Vallejo de Torres (Chair)
Director, National Institute of Toxicology and Forensic Sciences

Antonio Alonso Alonso (Secretario)
Practitioner with the Biology Service, Madrid Department, National Institute of Toxicology and Forensic Sciences

Manuel Crespillo Márquez
Practitioner and Head of the Biology Service, Barcelona Department, National Institute of Toxicology and Forensic Sciences

Delegates from official laboratories with representatives on the Standing Technical Committee (STC) personally attended three work sessions during 2015, held at the headquarters of the National Institute of Toxicology and Forensic Sciences at Las Rozas. The three sets of Standing Technical Committee meeting minutes set out below were drafted as a result of those sessions:

Minutes dated 24/02/2015

Minutes dated 18/06/2015

Minutes dated Minutes dated 15/09/2015

The most important subjects considered by the STC during 2015 are as follows:

- Accreditation of laboratories. The sixth national evaluation on quality assurance and accreditation of forensic genetics laboratories was carried out by reviewing certificates obtained in official (GHEP-ISFG and GEDNAP) competency tests and from the scope and accreditation status of each laboratory pursuant to ISO standard 17025.
- Approval of a document containing recommendations on the content and structure of forensic genetics expert reports.
- Discussion of comments regarding ISO standard DIS 18385 and voting indications as representatives of the AEN/CTN 197 GT4 Standardisation Technical Committee.
- Contamination Issues.
- Samples Post-Custody.
- New DNA technologies and new DNA markers.

- Presentation to the Commission Plenary body of the *"DNA-STR Massive Sequencing & International Information Exchange"* project (DNASEQEX: HOME/2014/ISFP/AG/LAWX/4000007135), financed by the *Internal European Commission Internal Security Funding Police programme.*

3.2 VI ANNUAL EVALUATION OF FORENSIC GENETICS LABORATORIES IN RELATION TO QUALITY ASSURANCE AND ACCREDITATION

Fulfilling the provisions established in:

- Section 8, ROYAL DECREE 1977/2008 governing the DNA analysis laboratories evaluation procedure.
- CNUFADN resolution on laboratories accreditation and quality control, approved at the CNUFADN plenary session held on 21/07/2009.
- EUROPEAN UNION COUNCIL FRAMEWORK DECISION 2009/905/JHA on accreditation of forensic service providers carrying out laboratory activities..

(http://eur-lex.europa.eu/LexUriServ/LexUriServ.douri=OJ:L:2009:322:0014:0016:ES:PDF)

http://eur-lex.europa.eu/legal-content/EN-ES/TXT/?uri=CELEX:32009F0905&from=ES[TR. Bilingual version]

The Standing Technical Commission (STC) directed the 2015 sixth annual request for documents on quality assurance and accreditation. Laboratories were asked to provide identification data, information on their areas of application, certificates of participation in quality controls and accreditation status for forensic genetics laboratories providing services to the Spanish State. The purpose was to ascertain the extent to which laboratories comply with the requirements established in the CNUFADN resolution on accreditation and quality control as approved at the CNUFADN plenary session held on 21/07/2009.

Documents were subsequently received from 21 laboratories (15 public laboratories and 6 private laboratories) and reviewed in the course of two CTP monographic sessions, which analysed results obtained by various different laboratories during the 2014 external quality controls, together with accreditation status and scope certificates issued by ENAC[10] .

The assessment identified 18 Laboratories that duly meet the requirements of the CNUFADN resolution and another 3 Laboratories which fail, despite having quality control procedures in place, to meet the requirements established in the CNUFADN resolution because they have not undergone the accreditation procedure established in ISO standard 17025.

Approval of the list of laboratories fulfilling the CNUFADN resolution requirements on accreditation and quality control for the year 2015 was proposed, issuing a certificate as evidence that each the aforesaid 18 laboratories had met those requirements.

The list of accredited laboratories for the year 2015 is provided as APPENDIX I hereto and also at the CNUFADN web portal address given below:

[10] Entidad Nacional de Acreditación-Spanish Accreditation Agency www. enac.es

https://www.administraciondejusticia.gob.es/paj/PA_WebApp_SGNTJ_NPAJ/descarga/Relacion_Lab_Cumplimiento_Acuerdo_CNUFADN_2015.pdf?idFile=f2a55f0f-9b8d-4bdb-92f9-6062d16ab57a [TR. Spanish only]

3.3 APPROVAL OF A DOCUMENT OF RECOMMENDATIONS ON THE CONTENT AND STRUCTURE OF EXPERT FORENSIC GENETICS REPORTS

The Commission Plenary body session held on 27/10/2015 approved the final document drawn up by CTP with recommendations for drafting expert forensic genetics reports and guidelines for presenting results including the following aspects:

- International recommendations and standards both of accreditation bodies and international Forensic genetics societies
- Structure and format for expert reports
- Presentation of results (preliminary analyses and genetics analyses)
- Evaluation of results (preliminary analyses, evaluation of matches in criminal investigation, evaluation of matches in DNA Data Bases, assessing compatibilities in parenting tests)

The approved document is transcribed in Appendix II and can be found at the CNUFADN Web portal given below:

https://www.administraciondejusticia.gob.es/paj/PA_WebApp_SGNTJ_NPAJ/descarga/RECOMENDACIONES%20SOBRE%20%20EL%20INFORME%20PERICIAL%20EN%20GENETICA%20FORENSE_2015.pdf?idFile=438e1272-61a8-4c15-9ef5-ffa53a4be58a[TR. Spanish only]

3.4 DISCUSSION OF OBSERVATIONS ON ISO STANDARD DIS 18385 AND VOTING INDICATIONS AS REPRESENTATIVES OF THE TECHNICAL STANDARDS COMMITTEE AEN/CTN 197 GT4

The Standing Technical Committee also commented on ISO Standard 18385 at the session held on 27/02/2015, specifically:

1. To add a footnote at heading 5.7, defining the scope of informed consent to include: taking of samples, DNA analysis and recording on a database for elimination purposes.
2. A note to be set out in Appendix A on the requirement to carry out DNA mitochondrial quantification on products specifically designed for mitochondrial DNA.
3. Appendix C to include STR markers: CSF1PO, TPOX and SE33.

Methods and thresholds for detecting human nuclear DNA established in the ISO standard draft were also discussed, although no comment or amendment was agreed.

It was unanimously agreed to vote APPROVING the revised wording including the aforementioned comments.

Finally, the wording was agreed, expressly limiting the standard to nuclear DNA analysis and directly excluding mitochondrial DNA analyses. Appendix C was amended to include the markers as suggested by the Standing Technical Committee.

3.5 DNA CONTAMINATION

The Standing Technical Committee session held on 15/09/2015 included an initial debate and consideration by all members in attendance of the procedures used by laboratories pertaining to the various institutions to minimise, monitor, document and report instances of DNA contamination. The following matters of interest were evaluated:

- The need to develop specific decontamination procedures and regular monitoring of instances of DNA contamination on DNA laboratory work surface areas and instruments.
- Developing DNA and DNA composition elimination databases, on the understanding that such databases not only require DNA analysts, but also professionals to take and send samples (judicial police, coroners....). The issue that arises in this regard is refusal to provide a biological sample for these databases for reasons of confidentiality, as has occurred in the Basque Country. The idea was mooted that there may be some interest in including the CNUFADN recommendation that there should be judicial police and coroners teams on the DNA Elimination database into future guidelines.
- The manner of recording, documenting and reviewing contamination events and procedures for tracking the contamination origin through the analytical flow of the laboratory (batches, extraction, PCR[11] , detection,...).
- The need for expert reports to refer (in certain forensic case scenarios) to issues of DNA contamination and to primary and secondary transfers of cell remains (e.g. one should particularly bearing in mind genetic identification of cell remains in cases involving sexual abuse of minors within the family environment).

In view of all the above, the proposal was submitted to carry out an updated review of international guidelines and recommendations available on the subject (ENFSI, ISFG, SWGDNAM, NIST, Forensic Regulator,...) and also to develop a technical recommendations document to minimise, monitor and document DNA contamination in forensic genetics laboratories.

3.6 POST-CUSTODY OF DNA SAMPLES

During 2015, the issue of post-custody of DNA evidence, samples and extracts was again discussed. The Standing Technical Committee agreed to make progress during 2016 on a general custody system that would apply to all institutions, in so far as custody criteria and time limits. The purpose of this would be for the Legal and Bioethics Group to take a proposal for legislative regulation on procedures and custody period in forensic genetics laboratories to the CNUFADN Plenary meeting.

[11] Polymerase Chain Reaction - a technique in molecular genetics that permits the analysis of any short sequence of DNA (or RNA) even in samples containing only minute quantities of DNA or RNA. PCR is used to reproduce (amplify) selected sections of DNA or RNA for analysis. www.emedicinehealth.com/pcr_polymerase_chain_reaction_test/article_em.htm

3.7 NEW DNA TECHNOLOGIES AND NEW DNA MARKERS

The increasing implementation in forensic genetics laboratories of new massive sequencing platforms was highlighted. This opens up the possibility of routinely applying new DNA markers to forensic cases and particularly highlights possible application of ancestral DNA markers and physical appearance DNA markers. The STC agreed on the need to review the current development status of these new DNA analysis systems, and also to evaluate criteria regarding application, interpretation and value as evidence.

3.8. PRESENTATION OF THE DNA-STR MASSIVE SEQUENCING & INTERNATIONAL INFORMATION EXCHANGE PROJECT (DNASEQEX: HOME/2014/ISFP/AG/LAWX/4000007135) FINANCIADO BY THE INTERNAL EUROPEAN COMMISSION POLICE SECURITY FUNDING PROGRAMME

On 27/10/2015, the CNUFADN Secretary presented the aims of the DNA-STR Massive Sequencing & International Information Exchange (DNASEQEX) Project approved by the European Commission within the Internal Security Police Funding Programme to the National Commission Plenary body. The beneficiaries are as follows:

Coordinator and Beneficiary:

Biology Service, Madrid Department, National Institute of Toxicology and Forensic Sciences

Co-Beneficiary 1:

Institute of Legal Medicine, Medical University of Innsbruck (Austria)

Co-Beneficiary 2:

Institute of Legal Medicine and Forensic Sciences, Charité –Universitätsmedizin Berlin (Germany)

Associate:

The Institute of Applied Genetics at the University of North Texas Health Science Center (USA)

The scientific and technological bases for this project lie in the recently developed Massively Parallel Sequencing (MPS) technology, also known as Next Generation Sequencing (NGS). These technologies have revolutionised forensic genome and genetic research by increasing the number of genetic markers that can be simultaneously analysed. This enhances resolution for genotyping purposes (sequencing data) compared to current technology possibilities (dimension data), and renders DNA analysis from degraded DNA samples more efficient.

The proposal is to foster implementation of MPS technology for forensic DNA analysis and also for international exchanges between DNA Databases, thereby developing a global forensic DNA standard for analysing 50-100 Short Tandem Repeat (STR) markers. The improved discrimination capability compared to current standard DNA is considerable and is achieved by means of capillary electrophoresis (23 STR autosomic markers and 27 STR sexual Y chromosome markers). The proposed system retains compatibility with STR loci as recorded on the national DNA databases and also with YHRD[12] database data sets, whilst dramatically improving capability. Spain is also well placed for close cooperation with the various professional Forensic Genetics organisations on establishing an agreement for selecting new STR markers capable of facilitating a variety of forensic applications (degraded DNA and mixed DNA analysis).

One of the main objectives has been to assess the possible impact of new data gleaned from the MPS-STR sequence on searches performed using criminal interest DNA databases (PRÜM and CODIS) in terms of efficiency, discrimination capability and to foster standardisation of nomenclature formats, as well as data exchange for faster implementation of MPS-STR profiles in European National DNA databases.

The proposed MPS-STR system, with discrimination capability of several orders of magnitude higher than current technology, will substantially reduce the likelihood of adventitious matches in the national DNA database service and lead to an increased number of “post-match” reports as established in EU Council Decision 2008/615 /JHA.

[12] Y-STR Haplotype Reference Database

4. APPENDICES: APPROVED RESOLUTIONS AND DOCUMENTS

APPENDIX I

LIST OF LABORATORIES THAT COMPLY WITH THE CNUFADN RESOLUTION ON ACCREDITATION AND QUALITY CONTROL

- Laboratorio de ADN de la Comisaría General de Policía Científica (Madrid)
- Laboratorio Territorial de Biología / ADN de la Jefatura Superior de Policía de Andalucía Occidental (Sevilla)
- Laboratorio Territorial de Biología / ADN de la Jefatura Superior de Policía de Andalucía Oriental (Granada)
- Laboratorio Territorial de Biología / ADN de la Jefatura Superior de Policía de Cataluña (Barcelona)
- Laboratorio Territorial de ADN de la Jefatura Superior de Policía de la Comunidad Valenciana (Valencia)
- Laboratorio Territorial de ADN de la Jefatura Superior de Policía de Galicia (A Coruña)
- Servicio de Criminalística de la Guardia Civil. Departamento de Biología (Madrid)
- Laboratorio de Genética Forense. Unidad de Policía Científica de la Ertzaintza. (Erandio, Vizcaya)
- Laboratorio de Análisis de la División de Policía Científica. Mossos de Esquadra (Sabadell, Barcelona)
- Instituto Nacional de Toxicología y Ciencias Forenses. Servicio de Biología. Departamento de Madrid
- Instituto Nacional de Toxicología y Ciencias Forenses. Servicio de Biología. Departamento de Barcelona
- Instituto Nacional de Toxicología y Ciencias Forenses. Servicio de Biología. Departamento de Sevilla.
- Instituto Nacional de Toxicología y Ciencias Forenses. Sección de Biología. Delegación de La Laguna.
- Instituto Universitario de Medicina Legal. Servicio de Genética Forense. Universidad de Santiago de Compostela (A Coruña)
- Navarra de Servicios y Tecnologías, S.A. (NASERTIC) (Villaba, Navarre)
- Citogen S.L. (Zaragoza)
- Genomica S.A.U. (Madrid)
- Neodiagnostica S.L. (Lleida)

Approved in Madrid by the CNUFADN[13]

27th October 2015

[13] National Commission for DNA Forensic Use

APPENDIX II

RECOMMENDATIONS APPLICABLE TO EXPERT REPORTS AND FOR PRESENTING RESULTS IN FORENSIC GENETICS ANALYSES

Various international scientific bodies and institutions (ISFG[14] , SWGDAM[15] , ENFSI[16]) have drawn up recommendations and guidelines on different aspects of activities carried on in forensic genetics laboratories (genetic markers, nomenclature, methodology standards, statistical evaluation of results). At the present time, however, few documents refer to standards or guidelines on drafting and transfer of results in expert reports. Some documents generally describe aspects in relation to the body of a report:

- Regulation on the National Institute of Toxicology and Forensic Sciences (Royal Decree 862/1998, of 8 May) [1]

https://www.boe.es/boe/dias/1998/06/05/pdfs/A18588-18592.pdf [TR. Spanish only]

- Quality Standards for genetic analysis in forensic laboratories –SWGDAM- (Scientific Working Group for DNA Analysis Method) [2]

http://swgdam.org/FBI%20Director%20Forensic%20Standards%20%20Revisions%20APPROVED%20and%20Final%20effective%209-01-2011.pdf

http://www.cstl.nist.gov/strbase/mixture/ReportWordingSuggestions2013.pdf

The ENFSI (European Network of Forensic Sciences Institutes) has recently started work on drawing up a standard for drafting DNA evaluation reports.

Expert reports are used to inform Courts of Justice of results arising from investigations of biological remains in forensic laboratories. Such results must be exactly, clearly and objectively communicated, avoiding all ambiguity. It is therefore crucial that such results are properly transferred, so they may be correctly understood by a Court.

UNE-EN Standard ISO/IEC 17025 [3] establishes general requirements in relation to technical competence of testing and calibration laboratories. Specifically, the aforesaid standard, at point 5.10, provides compulsory requirements as to how reports must set out results in that regard.

The document is based on UNE-EN Standard ISO/IEC 17025 and covers the various areas of concern, given the nature of analyses carried out in forensic laboratories. The recommendations have a dual objective: on the one hand, the recommendations have been prepared to help achieve greater standardisation among Spanish forensic laboratories in terms of presenting and transferring results generated by forensic genetics laboratories. On the other hand, the purpose is to facilitate judicial bodies understanding such reports. The details and characteristics of each Spanish forensic laboratory differ and these translate into certain nuances and aspects that are reflected in reports issued by their respective institutions. Nevertheless, the Commission considers that expert reports should agree on certain points, as necessary to objectively transfer results for proper analysis by any given judicial body.

[14] International Society for Forensic Genetics

[15] Scientific Working Group on DNA Analysis Methods

[16] European Network of Forensic Science Institutes

Spanish laboratories providing genetic analyses for forensic identification purposes generally issue two types of results. One type of result characterises fluids and, as the case may be, their genetic identification, comparison and subsequent evaluation (Recommendations 1, 2 y 3). On the other hand, there are results arising from introducing genetic profiles into the police database and carrying out a search (Recommendation 4).

This document describes general aspects in relation to the expert report format, and matters directly concerning presentation and evaluation of results.

RECOMMENDATION 1: BODY OF THE REPORT

Reports generated as a result of analysing biological evidence in the course of judicial proceedings must include at least the aspects deemed applicable under point 5.10 of UNE-EN standard ISO/IEC 17025. Those points are set out herebelow in view of the special characteristics of forensic genetics expert reports:

Descriptive elements

1. Heading (e.g. “DNA -biology report”, “expert report”...).

2. Identification of laboratory and town where the tests were carried out, if different from the address of the laboratory issuing the report.

3. Report unique identification (e.g. Serial number, record number, case number, report number....). Each page should contain an identification so as to ensure the page is recognisable as forming part of a report. The end of the test report must also be clearly marked.

4. The police or judicial body that requested the analysis must be identified, listing all police or judicial actions (e.g. official steps, summary proceedings, fast track proceedings, police witness report number, general or unique Case ID-...) related to the analysis subject of the report.

5. Description of the analysis purpose (e.g. genetic analysis and comparison of samples received, comparison against the database, genetic identification of human remains...).

6. Identification and detailed description of evidence received for analysis, stating date of receipt of the laboratory and specifying, whenever there is a record available, all circumstances related to collection of the evidence, as well as dispatch and receipt of samples at the laboratory and which may affect the results and/or conclusions of analyses carried out.

7. Identification and detailed description of samples subject of analysis. When applicable and relevant for explaining results and conclusions, reference should be made to the sampling plan applied.

8. Record the performance date and end date and time of analyses carried out.

9. Identification and description of methods used, with reference to standard laboratory working procedures establishing that method or, as the case may be, scientific bibliography describing the method used.

Results and conclusions

10. Simple and clear presentation of results obtained.

11. Results must be evaluated, including statistical evaluation when necessary. Evaluations should be performed in accordance with accredited laboratory procedures.

12. Presentation of conclusions drawn from results obtained.

References and notes

13. The laboratory report must include a section setting out references and bibliography used or consulted to carry out the analysis, and also for evaluation and final interpretation of results.

14. The end destination of evidence must be included, with due reference to safekeeping of evidence, along with any custody aspect the laboratory deems relevant.

15. If appropriate, the possibility of carrying out further analyses on the analysed samples should be mentioned.

16. The laboratory report must include the name(s), function(s) and signature(s), or equivalent identification of the person(s) who participated in and, as the case may be, supervised the analysis report, if supervision is included in standard work procedures. The date and place of issuing the report must also be stated.

17. When appropriate, a declaration should be included to the effect that the results solely relate to tested or calibrated elements.

18. The recommendation is to include a declaration stating that the report must not be reproduced, other than in its entirety, without the written approval of the laboratory.

RECOMMENDATION 2: PRESENTATION OF RESULTS

Reports issued by forensic genetics laboratories basically relate to two types of examination: characterisation of fluids and analysis for the purpose of genetic individualisation of the evidence, or for establishing biological kinship by genetic polymorphisms examination.

2.1. Characterisation of biological fluids

Pressumptive testing and confirmatory tests must be used to interpret results of examinations ascertaining the nature and provenance of fluids. Tests of this kind must be duly certified by the laboratory concerned, with particular attention given to sensitivity and specificity parameters.

The results obtained should be set out in the report in a clear and precise manner, avoiding the use of any ambiguous expressions or terms open to subjective interpretation.

2.2. Genetic analysis

When required according to internal laboratory work procedures, the recommendation is to present results obtained from genetic analysis in the form of a table.

Tables should include the following:

For autosomic STR marker results

– List of analysed markers. The recommendation is to list markers included in the European standard, whenever possible. [4]

http://eur-lex.europa.eu/legal-content/EN-ES/TXT/?uri=CELEX:32009G1205(01)&from=EN

– Presentation of genotype with reference to the nomenclature proposed by the International Society for Forensic Genetics (ISFG). [5].

http://www.isfg.org/files/80d96a6ba99e5122ae6136cff1c7aff88660cf1d.fsi1997.87.179.pdf

– List of samples analysed, provided in a manner permitting simple and unequivocal identification of samples.

For chromosome Y STR marker results:

– List of analysed markers. The recommendation is to list at least, and whenever possible, the markers described for the minimal haplotype.[6].

http://www.isfg.org/files/67d8387fdbf30bb8452b0a2ae469f7f0a9b615ed_fsi2001-124-5.pdf

– Presentation of haplotype using the nomenclature proposed by the International Society for Forensic Genetics (ISFG). [7].

http://www.isfg.org/files/8ae035945c0a56c55b0ebe9fede35bc6d81ea317.fsi2006.157.187.pdf

– List of samples analysed, set out in a manner permitting simple and unequivocal identification of the samples.

For mitochondrial DNA results (mtDNA)

– Area(s) of mtDNA examined. The recommendation is to examine at least the HVRI and HVRII regions.

– Presentation of base sequences edited in each regions.

– Presentation of haplotype with reference to the nomenclature proposed by the International Society for Forensic Genetics (ISFG). [8-10].

http://www.isfg.org/files/43b06dc93fb4c17e48adb86112bb5c3497635e1c_fsi2000-110-79.pdf

http://www.isfg.org/files/193a0fb10b5f417bb98e5a820b0cc4f534e184a3.fsigen_2014_13_134_parson_mtdna_recommendations.pdf

http://www.nlada.org/forensics/for_lib/Documents/1144680153.48/Considerations%20of%20EDNAP%20group.pdf [TR. Link does not open in the original document]

In all instances when required the recommendation is to attach explanatory captions to tables to help interpret the results shown (e.g. mutations, tri-allelic patterns, heteroplasmies, no result, STRs markers analysed....).

RECOMMENDATION 3: EVALUATION OF RESULTS

The conclusions section of the report issued by a laboratory must set out an evaluation of results obtained, as clearly and simply as possible, and must specifically respond to the analysis sought by the requesting body. Occasionally, such an evaluation may require specific technical and/or scientific data to be provided for a better understanding of the findings. The recommendation in those scenarios is to include the required information as a specific section within the body of the report.

3.1 Characterisation of biological fluids

A combined interpretation of results from pressumptive tests and confirmatory should enable a laboratory to unambiguously characterise investigated fluid or, as the case may be, to state that results are inconclusive.

3.2 Genetic analysis

Evaluation of match/compatibility between various items of evidence or reference samples

Reports drawn up with regard to genetic comparison results of matches between questioned and unquestioned samples subject to analysis must necessarily provide a statistical evaluation of the match. Forensic laboratories usually use either the combined probability of exclusion (CPE) or the likelihood ratio (LR) for statistical processing purposes. As stated in the other CNUFADN documents provided by this Commission, the recommendation is to use the likelihood ratio (LR) due to the fact that this permits joint evaluation of arguments adduced by the parties to judicial proceedings (accusation and defence).

https://www.administraciondejusticia.gob.es/paj/PA_WebApp_SGNTJ_NPAJ/descarga/Recomendaciones_Tecnicas_Perfiles_Mezcla_STRs.pdf?idFile=fc34c1ca-617d-428c-8979-041d322edbe3 [TR. Spanish only]

For statistical processing purposes, the report issued by laboratories must set out at least the following details:

–Presentation of the LR statistical result, including a description of the hypothesis. Equally, more than one LR calculation must be included when required due to the case background or at the request of a party to the proceedings.

–Explanation of the LR value obtained, avoiding the so-called “transposed conditional ”.

–State the population database used. In the case of autosomic markers, the recommendation is to use the Spanish population database [11], unless the circumstances of the case require that a different database be used.

–Equally, when evaluating mitochondrial haplotype DNA and chromosome Y STRs, the recommendation is to use the EMPOP [12] and YHRD [13] databases respectively. In both instances, the particular version and update used to calculate the haplotype frequencies must be referenced, as well as the population used.

–For mitochondrial DNA, it is furthermore essential to state the search parameters used in the population databases (nucleotide positions searched).

–When single parent markers (mtDNA/Y Chr) are used, the recommendation is to expressly record the nature of the marker as the lineage marker characteristic rather than the individual marker characteristic.

–Presentation and/or bibliographic reference of formulae and/or the statistics software or, as the case may be, standard laboratory working procedures used by the laboratory to carry out the LR statistical calculation.

–Verbal predicates are not advisable, as these can be interpreted subjectively by different parties to judicial proceedings.

In the particular instance when a mixed profile may be evaluated, according to internal laboratory procedures, and if one can deduce compatibility from that interpretation with an/some unquestioned sample/s, of transcendental significance for judicial proceedings, the recommendation is to carry out a statistical compatibility evaluation using the LR statistic and bearing in mind the ISFG recommendations in that regard [14-15], as well as the provisions set out in the previous section. Furthermore, and in so far as possible, the recommendation is that reports should include aspects such as an estimate of the number of donors and their gender.

Equally, express mention must be made of samples of a genetic profile quality that does not permit conclusions to be drawn, according to internal laboratory procedures.

Evaluation of compatibility and biological investigation of kinship relationships.

Whenever the context of judicial proceedings requires (direct or inverse) investigation of paternity/kinship compatibility, laboratories must provide the following details on the report:

–Biostatistical evaluation of paternity/kinship must be based on opposing mutually exclusive hypotheses. As stated in recommendations issued by the ISFG Paternity Testing Commission [16] in this regard, the paternity index (PI) is the recommended statistic for evaluating paternity compatibility.

–Description of the pair(s) of hypotheses considered for calculating the PI statistic. The same applies whenever more than one PI must be calculated due to the case background or at the request of a party to the proceedings.

–In the event correction parameters need to be used to evaluate paternity due to the population substructure, the appearance of mutations and/or silent alleles, the formulae or, as the case may be, the references where these appear, must set out within the body of the report together with mutation rates used, if any.

–References to the population database used. In the case of autosomic markers, the recommendation is to use the Spanish population database [11].

–Presentation and/or bibliographic reference of formulae and/or the statistics software or, as the case may be, standard laboratory working procedures used by the laboratory to carry out the PI statistical calculation.

–Predictive verbs are not advisable, as these can be interpreted subjectively by the various parties to judicial proceedings.

–Each laboratory is individually responsible establishing and acknowledging exclusion criteria. In instances of a paternal exclusion the must state the markers that show those inconsistencies.

RECOMMENDATION 4:

REPORTS GENERATED AS A RESULT OF INCLUDING PROFILES INTO THE POLICE DATABASE

Laboratories should state the following in reports drawn up as a result of including or searching genetic profiles in the police database (Organic Law 10/2007 of 8 October):

–Genetic profiles drawn from questioned and unquestioned samples that have been included into the National Database of genetic profiles pursuant to Organic Law 10/2007.

–If matches are found as the result of a database search carried out, the report must state the affiliation identification data corresponding to profile subject of the match, together with a statistical evaluation of the match using the LR value.

References

[1] Regulation igoverning the National Institute of Toxicology and Forensic Sciences (RD 862/1998, of 8 May)

[2] Quality standards for forensic laboratories in relation to genetic analyses –SWGDAM- (Scientific Working Group for DNA Analysis Method)

[3] General requirements for the competence of testing and calibration laboratories. International Standard ISO/IEC 17025

[4] European Union Official Gazette. Council Resolution of 30 November 2009 on the exchange of DNA analysis results. (2009/C 296/01)

[5] Bär W., Brinkmann B., Budowle B., Carracedo A., Gill P., Lincoln P., Mayr W., Olaisen B. (1997), 'DNA recommendations. Further report of the DNA Commission of the ISFG regarding the use of short tandem repeat systems.', Forensic Sci Int. 87(3), 179-184

[6] Gill P., Brenner C., Brinkmann B., Budowle B., Carracedo A., Jobling MA., De K., Kayser M., Krawczak M., Mayr WR., Morling N., Olaisen B., Pascali V., Prinz M., Roewer L., Schneider PM., Sajantila A., Tyler-Smith C. (2001), 'DNA Commission of the International Society of Forensic Genetics: Recommendations on forensic analysis using Y-chromosome STRs', Forensic Sci Int. 124, 5-10

[7] Gusmao L., Butler JM., Carracedo A., Gill P., Kayser M., Mayr WR., Morling N., Prinz M., Roewer L., Tyler-Smith C., Schneider PM. (2006), 'DNA Commission of the International Society of Forensic Genetics. DNA Commission of the International Society of Forensic Genetics (ISFG): an update of the recommendations on the use of Y-STRs in forensic analysis.', Forensic Sci Int. 157, 187-197

[8] Tully G., Bar W., Brinkmann B., Carracedo A., Gill P., Morling N., Parson W., Schneider P. Considerations by the European DNA profiling (EDNAP) group on the working practices, nomenclature and interpretation of mitochondrial DNA profiles. Forensic Sci Int. (2001) 124(1):83-91.

[9] Carracedo A Bär W, Lincoln P, Mayr W, Morling N, Olaisen B, Schneider P, Budowle B, Brinkmann B, Gill P, Holland M, Tully G, Wilson M (2000) DNA Commission of the International Society for Forensic Genetics: guidelines for mitochondrial DNA typing. Forensic Science International, 110 79–85.

[10] Parson W., Gusmao L., Hares DR., Irwin JA., Mayr WR., Morling N., Pokorak E., Prinz M., Salas A., Schneider PM., Parsons TJ. (2014), 'DNA Commission of the International Society for Forensic Genetics: revised and extended guidelines for mitochondrial DNA typing.', Forensic Science International: Genetics 13, 134-142

[11] García O, Alonso J, Cano JA, García R, Luque GM, Martín P, Martínez de Yuso I, Maulini S, Parra D, Yurrebaso I (2011). Population genetic data and concordance study for the kits Identifiler, NGM, PowerPlex ESX 17 System and Investigator ESSplex in Spain. Forensic Sci Int Genet. 6(2): e78-e79 (2012)

[12] Parson W, Dür A. (2007) "EMPOP—A forensic mtDNA database". Forensic Science International: Genetics - Vol. 1, Issue 2, Pages 88-92. www.empop.org.

[13] Willuweit S., Roewer L. (2007), 'Y chromosome haplotype reference database (YHRD): Update', Forensic Science International: Genetics 1(2), 83-7. www.yhrd.org

[14] Gill P., Brenner CH., Buckleton JS., Carracedo A., Krawczak M., Mayr WR., Morling N., Prinz M., Schneider PM., Weir BS. (2006), 'DNA commission of the International Society of Forensic Genetics: Recommendations on the interpretation of mixtures', Forensic Sci Int. 160, 90-101.

[15] Gill P., Gusmão L., Haned H., Mayr WR., Morling N., Parson W., Prieto L., Prinz M., Schneider H., Schneider PM., Weir BS. (2012), 'DNA commission of the International Society of Forensic Genetics: Recommendations on the evaluation of STR typing results that may include drop-out and/or drop-in using probabilistic methods', Forensic Science International: Genetics 6(6), 679-688

[16] Gjertson DW., Brenner CH., Baur MP., Carracedo A., Guidet F., Luque JA., Lessig R., Mayr WR., Pascali VL., Prinz M., Schneider PM., Morling N. (2007), 'ISFG: Recommendations on biostatistics in paternity testing', Forensic Sci. Int. Genetics 1(3), 223-231.

Madrid, 28th September 2015

COMMISSION CHAIR

Ricardo Conde Díez