

DNA Analysis Specialist Group (DNASG)

Note of the fourteenth meeting held on 11 June 2020, via teleconference.

1. Welcome and introductions

- 1.1 The Chair welcomed all to the meeting. A list of attendees by organisation is available at Annex A.
- 1.2 A new representative for the Body Fluids Forum was welcomed to the Group.

2. Minutes of the last meeting, actions and matters arising

- 2.1 The representative from FINDS requested an amendment to the minutes from the November meeting this was agreed by the Chair.

Action 1:

- 2.2 FINDS representative to provide a summary of the mixtures work for inclusion in the November minutes in-line with FINDS information in the public domain and secretariat to amend minutes.

- 2.3 The following matters arising from the previous DNA SG meeting were discussed:

- a. Action 2 (14.5.19): An updated Terms of Reference (ToR) for the DNASG had been shared with the Group. The Group agreed with the content of the ToR and the document would be published in due course. This action was complete.
- b. Action 3 (20.11.19): Reference list for persistence papers to be added to FSR-G-213. The representative from the FSRU updated the group that in fact these references would be more appropriate to include in FSR-G-208

and this would be added during the update of FSR-G-208. This action was closed.

- c. Action 16 (20.11.19): Paper on mixtures trial, a final draft version has been sent to the FSP working group for comment and the amalgamation data from 2014 trial with the data from the 2018 trials for comparison should be finished in the coming weeks. The Regulator asked if the draft (Association of Forensic Service Providers) AFSP proficiency trials document could be shared with the DNASG. After comments had been received from the AFSP WG and actioned the draft could be shared.
- d. Action 2: Scottish Police Authority Forensic Services representative to share draft AFSP mixtures trial document with the DNASG.
- e. Actions 2 and 9 (from FSAC): These actions had been added to the work plan and would be covered in item 4.
- f. Action 8 (from QSSG): This action would be covered in item 3.

2.4 All other actions were complete.

2.5 The group were provided with an update on the work plan:

- a. Review/Updates: DNA Codes FSR-C-108, would be covered at item 6; FSR-G-202, FSR-G-208, and FSR-P-302 need to be updated for accessibility and minor updates would be made at the same time. Input from individual members would be sought to confirm these updates were correct. These updates needed to be completed for publication in September 2020.
- b. Mixtures Proficiency testing document, FSR-G-224, this document had been published however, required an update for accessibility.
- c. Rapid DNA, FSR-G-229, this document would be covered at item 9. The publication date had been put back to winter 2020.
- d. Y-STR, FSR-G-227, this document would be covered at item 8. The publication date for this document was autumn 2020 but this could be published later depending on the amount of work required.
- e. Relationship testing, FSR-G-228, would be covered at item 8. The document updates were on track to publish this item in the autumn.

- f. FSR-G-213, this document needed to be finalised by August the 21st for publication in September 2020.
- g. NGS, Next Generation Sequencing items had been added to the workplan and the next steps for this work needed to be agreed. This would be covered in item 4.

3. Contamination

QSSG issue paper

- 3.1 A representative from the Regulator's Quality Standards Specialist Group (QSSG) presented a paper on batch testing of consumables. The QSSG was seeking the views of the DNASG on appropriate approaches to identify DNA contamination in a batch of consumables and responsibilities for root cause analysis.
- 3.2 The DNASG were informed that a piece of work had been carried out to review the requirement to batch test consumables that had been Ethylene Oxide (EtO) treated. UKAS had been approached to establish what users would need to do to evidence the acceptability of these consumables. UKAS had responded that as consumable manufacturers were self-certifying to the EtO standard there was no oversight of the quality of the treatment. UKAS could not certify against this standard as it was not commercially viable and had agreed that an audit could be carried out as an independent assessment. This had been done and a report had been shared with the QSSG. A version of this report would be circulated to DNA SG.

Action 3:

- 3.3 QSSG representative to provide the secretariat with a version of the consumables report that can be shared with the DNA SG and secretariat to circulate.
- 3.4 The DNASG were asked to assist with clarifying the criteria for consumables failing batch testing for the manufacturer to set appropriate standards. The DNASG was asked to agree national approach to testing of consumables and defining the pass/fail criteria.

- 3.5 It was noted that the ISO 18385 standard stipulates at 4.3:
“A result is considered a fail if more than 4 alleles/peaks appear above the analytical threshold. If results are determined by consensus then at least 2 of 3 replicates must display the same alleles”
- 3.6 The DNASG were asked if these criteria could be used for a national position.
- 3.7 The Regulator noted that in the draft update of FSR-C-108 that had been circulated ahead of the meeting, new criteria were proposed for QC acceptance of a consumables batch of no more than two designated allele peaks obtained by replicate PCR analysis, i.e. the same alleles are detected above the analytical threshold. The criteria in this document should be the same as the position agreed by the DNASG on this issue.
- 3.8 The representative from QSSG highlighted that the ideal would be for EtO treated consumables to be used by all however, cost was a major consideration in the introduction of EtO treated materials. It would be important to set criteria for background levels of DNA in consumables that was stringent but not so stringent as to significantly push up the costs of such consumables.
- 3.9 The representative from the FSRU agreed with this comment but highlighted that the lack of data on background DNA levels and the prevalence of allelic drop-in made it difficult to set an appropriate standard.
- 3.10 The representative from Eurofins Forensic Services (EFS) informed the group that EFS had published a paper on allelic drop-in that could be circulated to the Group. The representative noted that requirements to replicate the same two peaks in repeat PCR analysis would not be possible as DNA levels would be too low to be reproducible. There was no clear distinction between contamination and allelic-drop in.
- Action 4:**
- 3.11 The Association of Forensic Service Providers representative to share their paper on allelic drop-in and secretariat to circulate.
- 3.12 The representative from the QSSG discussed a national position for the levels of acceptable DNA in consumable testing as if each FSP applied an analytical

threshold this could result in variation between FSPs on the amount of DNA deemed acceptable.

- 3.13 The Regulator noted that variation in detection sensitivities should be reflected so threshold may be a better measure. The representative from Cellmark Forensic Services (CFS) agreed with the Regulator's position highlighting that quantification was not accurate at low levels of DNA. Would agree that replication was not possible and that use of FSP specific analytical thresholds would be appropriate. The representative would confirm the allele threshold for consumables testing at CFS to assist with defining a national position.

Action 5:

- 3.14 Cellmark Forensic Services (CFS) representative to confirm allele threshold for consumables testing at CFS.
- 3.15 The representative from key Forensic Services (KFS) noted that they used locus by locus thresholds and two or more peaks above the locus threshold would trigger an investigation. The representative from KFS commented that a threshold of four peaks would not be problematic, this would be less stringent than their current level of two peaks.
- 3.16 The representative from the SPA Forensic Services commented that in their laboratory detection of two peaks would trigger investigation however any one peak over 100rfu would also trigger a contamination investigation.
- 3.17 The representative from Forensic Science Northern Ireland (FSNI) informed the group that FSNI have an analytical threshold of four peaks for reinvestigation but would need to confirm if this was also the case for consumables.
- 3.18 The Metropolitan Police Service (MPS) representative agreed with using analytical thresholds and highlighted that in determining the number of peaks to trigger an investigation chemistries using a large number of loci should be considered.
- 3.19 The DNASG asked whether they would accept the ISO 18385 standard of no more than four peaks above the threshold as the acceptable standard to use in FSR-C-108 and as a requirement for EtO-treated consumables manufacturers

to aim to meet. More than four peaks above threshold would be a fail and trigger an investigation and quarantine a batch of consumables.

- 3.20 Once a batch of consumables had been quarantined further consumables from that batch would be tested by a different FSP. The Group were asked to consider how recall or release of the quarantined batch of consumables would be determined by testing. The representative proposed recall of a batch if the same five alleles were detected. The Regulator and the Governance Group would be informed. If the same five alleles were not detected the Regulator and the Governance Group would be informed and further investigation would take place.
- 3.21 The view of the Group was that it would be unlikely for the same five alleles to be detected given the low levels of DNA. The Regulator also commented that it would seem wrong to allow a pass if a different set of 5 alleles were detected and that further data was needed on allelic drop-in to allow a decision to be made on batch recall.
- 3.22 The representatives from Cellmark and the SPA Forensic Services could share data on allelic drop-in. The Regulator requested data from all FSPs represented and noted that this data could be summarised if needed.
- 3.23 There was general agreement from the Group that detection of a number of alleles above the analytical threshold would trigger batch quarantine, the final decision on the number of alleles to trigger a fail would depend on the drop-in data from the FSPs.

Action 6:

- 3.24 Representatives of Forensic Service Providers to provide data or data summaries on allelic drop-in to assist with identifying an appropriate level for triggering investigation of consumable contamination.
- 3.25 The Group were in agreement that it would not be possible to define repeat characteristics, the same alleles being detected in a repeat PCR, and proposed that the batch would fail if an unacceptable number of alleles were again detected following repeat testing at a different FSP.

- 3.26 The representative from the QSSG also sought a decision on the number of consumables from a batch to submit for further testing if contamination had been identified in a first round of batch testing. It was agreed that a final decision would await the receipt and review of data from the FSPs. This data would be used to draft wording for the update to FSR-C-108. This update would be shared with the DNASG for agreement and the agreed process would be used to define the procedure for consumables batch testing.

FSR-C-208

- 3.27 The Group had been provided with a working draft of the updates to the FSR-G-208 document on control and avoidance of contamination in laboratories. This had been shared for information and the FSRU would follow up specific points with individuals.

Contamination Elimination Database options paper

- 3.28 The Group were presented with an options paper on avoidance of DNA contamination in the recovery of airbags from vehicles for their consideration.
- 3.29 Police forces had sought guidance from the Forensic Information Databases Service (FINDS) on how to manage taking elimination samples from vehicle recovery personnel, who were handling vehicles seized for forensic examination.
- 3.30 The DNASG were asked to consider options to feedback to the forces. The discussion would also assist the FSRU in the updating of FSR-P-302; Codes of Practise, protocol - DNA contamination detection.
- 3.31 For context the group were informed that there was a high turnover of staff in the vehicle recovery garages.
- 3.32 The representative from FINDS highlighted the need to balance cost to forces against the risk of contamination was considered, particularly given the high turnover of staff. It was suggested that noting the name of the recovery driver to be returned to at a later date if needed would be in alignment with the procedure for interpreters used in Sexual Assault Referral Centres. It was noted

that this could cause problems if contamination was detected and the recovery operative had moved on.

- 3.33 The Regulator asked if members were aware of airbag contamination being an issue. The representative from Cellmark was not aware of specific incidents but noted that mixed profiles from airbags were common even if only one person had been in the car. Experiments on car examinations had shown that airbag contamination was common therefore collection of elimination samples would be beneficial. It was noted that if elimination samples were taken, they could be held pending DNA analysis of the airbag and only processed if needed. If this approach was adopted samples could be retained for a maximum of six months.
- 3.34 Contamination was not thought to arise from installation, the representative from Cellmark noted that airbags were largely remotely assembled, and DNA was only found very occasionally on undeployed airbags.
- 3.35 The representative from PSNI commented that they had experience of contamination on steering consoles from recovery of a vehicle.

Action 7:

- 3.36 FSRU/FSR to feedback to the head of the Forensic Collision Investigation Network and seek any further information.

Testing PPE for DNA

- 3.37 The group were advised that the document FSR-G-206, Anti-Contamination at Crime Scenes, contained a section calling for PPE to be retained for subsequent analysis if necessary. The views of the DNASG were sought as to whether this requirement should be removed as it did not appear that PPE was being submitted for testing.
- 3.38 The representative from the Scottish Police Authority (SPA), Forensic Services advised that following an instance of contamination from gloves on a penile swab they routinely submit the gloves that were worn by the medical examiner. The representative from the FSRU noted that this guidance should be included in the Faculty of Forensic and Legal Medicine (FFLM) sample collection

recommendations but would not need to be included in FSR-G-206 which covered crime scenes.

- 3.39 The representative from Cellmark commented that when attending scenes PPE from all examiners was sometimes collected, generally this would all be packaged together. The representative was unable to recall an instance of PPE being submitted to the laboratory for examination. Representatives from Eurofins and the MPS also commented that PPE was not routinely submitted for laboratory examination.
- 3.40 The group were asked that any evidence of laboratory examination of PPE be provided to the FSRU. If no further information was received, then reference to retaining PPE for investigation of contamination would be removed from FSR-G-206.

Action 8:

- 3.41 Any comments or evidence of ever needing to DNA test PPE as part of addressing contamination, to be sent to the FSRU.

4. DNA 'Futures'

- 4.1 The Regulator would be seeking guidance from the Group on the types of cases that would be suitable for Massively Parallel Sequencing in the autumn.
- 4.2 The Regulator would also be seeking input from the Group on the types of samples that would be appropriate to consider for genetic genealogy techniques. As the Homicide Working Group had issued guidance advising against the use of genetic genealogy techniques in criminal cases there was no urgent need to provide examples, but these would be sought in the autumn.

5. Discussion on DNA mixtures

- 5.1 An update on the DNA mixtures trials work was given by the representative from the SPA Forensic Services who was leading on this work.
- 5.2 The original 2014 trial data had been sent to six FSPs, four of these had returned data. The analysis had been constrained by what was possible with the techniques used in 2014 and the majority had only worked with profiles 1

and 2. The view of the representative from the SPA Forensic Services was that enough data had been collected for the report.

6. DNA Codes of Practice (FSR-C-108) – Update and discussion

6.1 The Group had been provided with a working draft of the updates to the FSR-C-108 appendix of the Codes of Practise and Conduct on DNA Analysis. The main area for discussion was the batch testing criteria and this section would require updating in line with the process for consumables testing once this was agreed.

6.2 The group were informed that there were a number of references in the document's glossary that did not relate terms used in other documents and members were asked to check that these terms were correctly defined.

Action 9:

6.3 All to check that the glossary terms highlighted in yellow in the draft FSR-FSR-C-108 are correct and send any comments to the secretariat.

6.4 The representative from the FSRU highlighted that there were substantial updates to this document. Once the batch testing section had been updated the document would be circulated to members for final comments. When the document was circulated the DNASG would be asked to review the QA/QC section of the document which included two tables and a number of footnotes. These would need to be checked to ensure they were an accurate reflection of working practise.

6.5 The representative from the FSRU added that reference to the UKAS Guidance on the Application of ISO/IEC 17025:2017 Dealing with Expressions of Opinions and Interpretations (LAB 13) would also be added to FSR-C-108.

7. Profile interpretation document (FSR-G-213) – Updates and Discussion

7.1 The representative from the FSRU informed the members that the FSR-G-213 document had been updated and the primer binding site mutation section was to be added back in to this document.

- 7.2 The Regulator sought input from the members to assist with drafting of the new appendix to the Codes of Practise on Evaluation and Interpretation of Evidence. The initial work on this document had been a workshop with statisticians and interpretation experts followed by discussions with a small working group. A comment had been made that the term “in the order of” should be used when providing likelihood ratio calculations rather than “at least”.
- 7.3 The Chair confirmed that the term “in the order of” had previously been agreed and the justification for this had been published in a Criminal Law Review paper.
- 7.4 The representative from EFS commented that recent discussion had been that likelihood ratio calculations may be many of orders of magnitude greater than one billion and therefore the term “in the order of” would not be appropriate.
- 7.5 The reference to the Criminal Law Review paper on the term “in the order of” would be added to FSR-G-213 and members could review this reference. Further discussion to confirm the most appropriate wording would be required.

Action 10:

- 7.6 JG to update FSR-G-213 with primer binding site mutation section and update in line with DNA interpretation document and circulate for final review and comments.

Action 11:

- 7.7 The Chair to share with the group the papers on likelihood ratio terminology for circulation to the group. Secretariat to circulate.
- 7.8 The representative from SPA Forensic Services commented that the Forensic Capability Network (FCN) were also reviewing terminology and queried whether there could be duplication of work. The Regulator replied that the work on the appendix to the Codes of Practise and the work of the FCN were distinct.
- 7.9 The representative from EFS identified an error in the wording at point 8.1.1a of FSR-G-213 that stated:
“Retention of ‘1 in 1 billion’ as the maximum quoted LR in statements and presented evidence”.

Action 12:

- 7.10 FSRU representative to correct of the wording in the draft FSR-G-213 with regard to 8.1.1 a.

8. Y-STR Update and discussions

FSR-G-227 – Y-STR profiling

- 8.1 A draft of the new guidance document, FSR-G-227, on Y-STR profiling had been circulated to the members ahead of the meeting.
- 8.2 The latest version of FSR-G-227 included recommendations from the Association of Forensic Service Providers (AFSP). However, following the publication of a pre-proof of the Recommendations on the Interpretation of Y-STR results in Forensic Analysis from the DNA Commission of the International Society of Forensic Genetics (ISFG), FSR-G-227 would need to be further reviewed. The representative from the FSRU proposed adding the recommendations from ISFG and requesting the review of the document by the sub-group. This proposal was accepted by the DNASG.
- 8.3 The Regulator expressed her thanks to those who had worked on producing the FSR-G-227 document.

Evidential weight assignment to Y-STR profiles (EWAY)

- 8.4 The representative from FINDS spoke to the members about the Home Office proposal for a UK Y-STR database. The project would have two main elements; implementation of a UK intelligence Database of Y-STR profiles and; a reference database for Evidential Weight Assessment to Y-STR profiles (EWAY).
- 8.5 In order to create the reference database, it was proposed that 10,000 Y-STR profiles be collected. Two methods for collection of these profiles were being considered by FINDS; outsource collection of samples and statistical analysis to a partner organisation or; co-ordination of sample collection and statistical analysis by FINDS.

- 8.6 The representative from FINDS clarified that the 10,000 profiles would be in addition to Y-STR profiles that had previously been collected in the UK and held on the Y-STR Haplotype Reference Database (YHRD). These additional 10,000 profiles would be representative of the ethnicity of the UK population. It was also clarified that figures referred to in the proposal document in terms of numbers of Y-STR profiles held on databases would be a snapshot in time and would not be continuously updated.
- 8.7 The members were asked whether they accepted the approach proposed by FINDS. There were no comments from the members on the proposals. Members were asked to send any comments to the FINDS representative by the 14th of July.
- Action 13:**
- 8.8 Group to feedback any comments on the Y-STR database briefing paper prepared by FINDS. Secretariat to forward all comments by 14 July.
- 8.9 The Regulator noted that the statistical analysis used for the EWAY and those described in FSR-G-227 would need to be in agreement.

9. Work Plan Updates

FSR-G-228, Relationship testing

- 9.1 The representative from the FSRU informed the members that the relationship testing sub-group had met on several occasions and this document was almost complete. Given the number of documents that the members were being asked to review the representative asked the members if they would be in agreement with the sub-group agreeing the final version of this document. This was agreed.

FSR-G-229 – Rapid DNA Devices

- 9.2 The members were informed that this document was re-drafted in January following attendance at several meetings and an ENFSI workshop. A section on security considerations remained to be added to the document.

- 9.3 The members were informed that the Federal Bureau of Investigations (FBI), Combined DNA Index System (CODIS) and National Institute of Standards and Technology (NIST) had set guidance for manufacturers of Rapid DNA devices on the validation of the software. This guidance stipulated analysis of 1200 samples, 200 of which were used in the developmental validation and 1000 new samples. The members were asked whether these guidelines could be incorporated into the FSR-C-229 document as the minimum standard for manufacturers or suppliers. This was agreed.
- 9.4 The representative from KFS explained to the Chair that as KFS did not use any Rapid DNA devices they would not provide any comment on FSR-G-229.
- 9.5 The FSRU representative proposed that the document sub-group carried out the final drafting and review of this document at which point it would be sent to the Regulator for final review. The members agreed with this approach.
- 9.6 The FSRU would update the workplan to reflect the actions agreed.
- Action 14:**
- 9.7 FSRU representative to update the DNA SG workplan.

10. Stakeholder Updates

FINDS

- 10.1 The members were provided with a written update from FINDS. The main points of the update were:
- a. The scheduled go-live date for the new National DNA database (NDNAD2) was the 20th of July and readiness assessments were in place to inform users.
 - b. The FIND Strategy Board had approved a proposal to increase the number of loci on the NDNAD and this work package would be added to the Home Office Biometrics Programme (HOB) DNA Stage 3 work plan.
 - c. An options paper has been drafted to determine the appropriate way forward for the collection of approximately 10,000 Y-STR samples/profiles

for use as a Y-Haplotype Reference Database for the UK. All options also included statistical implementation based on the modelling approach by Anderson MM, and Balding DJ (2017)

UKAS

10.2 The members were provided with a written update from UKAS. The main points of the update were:

- a. UKAS would continue to operative remote assessments until at least the 1st October 2020. Priority would be given to Surveillance and Reassessment visits to ensure that organisations can maintain / renew their current accreditation.
- b. Within the forensic sector most assessments would require a subsequent site visit later therefore, assessments were being split between a Part 1 Remote Assessment and a Part 2 Site Assessment.
- c. Further detail could be found in the Technical Policy Statement (TPS) - TPS 73 UKAS Policy on Accreditation and Conformity Assessment During the COVID-19 Outbreak (Edition 1, April 2020) and on the UKAS website at <https://www.ukas.com/coronavirus/>
- d. TPS 47 – UKAS policy on Participation in proficiency Testing Edition 4 February 2020 had been updated to clarify that satisfactory performance, and/or appropriate corrective actions following proficiency testing must be demonstrated before accreditation could be granted.
- e. UKAS would start assessing against the version 5 of the Codes from the 22nd of August 2020.

Professional and Scientific Updates

Association of Forensic Science Providers (AFSP) DNASG update

10.3 The Covid-19 pandemic had affected the ability of this group to meet. The group had been working on the DNA mixtures report and the group were grateful to the representative for the SPA Forensic Services for leading on this report.

Chartered Society of Forensic Sciences (CSFS) update

- 10.4 The Council had met in the previous week to discuss the CSFS conference and an update on this would be provided in due course.

European Network of Forensic Science Institutes (ENFSI) update

- 10.5 The autumn meeting in Lisbon had been postponed to April/May 2021. Virtual sessions may be run online by some of the working groups and if so, the representative would share details of these with the members.

Body Fluids Forum

- 10.6 The members were provided with a written update. The main points of the update were:

- a. The forum met in June 2020.
- b. Analysis of the findings from the project examining the transfer of male DNA in simulated sexual and social contact scenarios was complete and the results of this work would be presented at the CSFS conference.
- c. Reports on several BFF projects had been drafted for initial review by members and draft papers for publication had been prepared for a further set of BFF projects and these were undergoing peer review. The representative from the BFF noted that as a result of the Covid-19 pandemic the deadline for review of these papers had been extended to August.
- d. The BFF planned a bulk publication of papers and short communications and had discussed this with the editor of Science and Justice.

International Society for Forensic Genetics (ISFG) update

- 10.7 The members were provided with a written update. The main points of the update were:

- a. As a result of the Covid-19 pandemic several planned meetings had been cancelled or postponed: The 12th Haploid Markers Meeting (2020) would take place from the 9th to the 12th of June 2021 in Budapest; and the English-Speaking Working Group (2020) meeting had been cancelled and would next meet in 2022. The International ISFG Congress was expected

to take place in Washington in August 2021 but this had not yet been confirmed.

- b. The ISFG had published their DNA Commission on interpretation of Y-STR in forensic casework (Roewer L *et al*: FSI Genetics)
- c. The results of the EDNAP collaborative exercise on body-fluid identification using massively-parallel sequencing had been published (Ingold S *et al*: FSI Genetics)

10.8 The Chair asked the ISFG representative for an update on the Y-STR guidelines for mixed profiles as the first document published only addressed unmixed profiles. The representative would find out about this and report back to the group.

10.9 The representative from CFS asked if there was an update on Part A of the EDNAP collaborative transfer exercise as they had not been contacted since volunteering. The representative would find out about this and report back to the group.

Action 15:

10.10 ISFG/EDNAP representative to enquire about the guidelines for mixed Y-STR profile interpretation and the collaborative transfer exercise and whether participants should have been contacted.

11. AOB

11.1 The representative from CFS asked for an update on the options for improving the presentation of mixed DNA results in Streamlined Forensic Reports (SFR). The Regulator responded that the options that had been raised by the DNASG were being reviewed. The final decision would not sit entirely with the Regulator and discussion with other stakeholders, including the SFR Board, would be required. The group would be kept informed of progress.

11.2 The EFS representative was attending that the National SFR Board the following day and would inform the Board that the Regulator was undertaking a review of the options and that a discussion would be needed once the information had been reviewed.

Action 16:

- 11.3 Key Forensic Service representative to raise with the National SFR board that a discussion with the Regulator on mixtures interpretation will be required.

12. Date of the next meeting

- 12.1 The next meeting to be held on the 20th of October 2020 and likely to be via teleconference.

Annex A

Organisation Representatives Present:

Principal Forensic Services (chair)

Forensic Science Regulator

Forensic Science Regulation Unit

Home Office Science Secretariat

Body Fluid Forum

Cellmark Forensic Services

Chartered Society of Forensic Sciences

Eurofins Forensic Services

Forensic Information Databases Service

Forensic Science Ireland

Forensic Science Northern Ireland

International Society for Forensic Genetics

Key Forensic Services

Metropolitan Police Service

Royal Statistical Society

Scottish Police Authority (SPA) Forensic Services

United Kingdom Accreditation Service (UKAS)

Guest:

Member of the FSR's Quality Standards Specialist Group (QSSG)

Apologies:

Crown Prosecution Service (CPS)