

OFFICIAL INQUIRY FILES and DOCUMENTS

JOHN ROBERT LOWE F.S.S REPORT

This information belongs to the Ministério Público in Portimão, Portugal.
It was released to the public on 4 August 2008 in accordance with Portuguese Law

Siten

2280 to 2281 FSS Forensic Report re G & K McCann DNA samples 2007.07.28

TRANSLATION BY ALBYM

09-Processos Vol IX Pages 2280 to 2281

09_VOLUME_IXa_Page_2280



THE FORENSIC SCIENCE SERVICE
WETHERBY LABORATORY, SANDBECK WAY, AUDBY LANE,
WETHERBY, WEST YORKSHIRE, LS22 7DN
FORENSIC REPORT

Officer in case: Det Supt Prior

Client: Leicestershire Police, New Parks

Police reference: 07/06085 Operation TASK

Laboratory reference: 300 655 190

Order reference: 400 913 6069

Scientist: Lesley Denton

09_VOLUME_IXa_Page_2281



Number of pages: 2

Re: Abduction of Madeleine McCann on 3rd May 2007

A DNA profile has been obtained from the reference samples of
Kate HEALY (51162896) and Gerald McCANN (511622897).

A DNA profile has also been obtained from a pillowcase (SJM/1).

DNA profiling reveals a series of bands, half of which a child
inherits from their natural mother (maternal) and half of which it
inherits from their natural father (paternal).

In this case, all of the bands present in the profile of obtained from the pillowcase are represented in the combined profiles of Kate HEALY and Gerald McCANN. This what I would expect to find in the profile obtained from the pillowcase originated from a natural child of theirs.

The results of the DNA profile obtained from the pillowcase is approximately 29 million times more likely if the profile originates from a natural child of theirs rather than someone unrelated to them.

In my opinion, the results detailed above provide extremely strong support for the view that the profile obtained from the pillowcase originates from a natural child of Kate HEALY and Gerald McCANN.

Please note: I understand that the McCANN - s have a second female child. It therefore remains a formal possibility that the DNA on the pillowcase could have originated from her as the genetics would be in keeping with those described above.

If I can be of further assistance or you require a CJA statement please do not hesitate to contact me at the laboratory on 01937 548287.

Yours sincerely,

Lesley Ann Denton
FORENSIC SCIENTIST
Date: 28 June 2007

[2282](#) FSS Document regarding sample destruction 2007.08.21(English)

09- Processo 09 IX Page 2282 also Outros Apensos VolI Page 97



Letter from the FSS

Destruction of Samples

Investigating officer. Stuart Prior

A - Perishable samples.

Certain samples constitute a potential health risk. With the concurrence of the Home Office, it has been decided that such samples will not be submitted to the courts unless specifically requested by the Defence. (This is an extension of the procedures for the disposal of blood samples previously agreed by the Lord Chief Justice, the Director of Public Prosecutions and the former

Chief Metropolitan Magistrate.

The laboratory has examined one or more of the samples listed below. They will not be returned to you but will be destroyed in due course unless we are requested by the Defence to preserve them. You should notify the Defence solicitors in accordance with Home Office circulars 40/73 and 74/82 which allow a period of 21 days in which notice in writing must be given, by the defendant or his legal representative to the laboratory to prevent the samples being destroyed.

- Blood samples.
- Saliva samples.
- Swabs from body orifices.
- Other swabs bearing potentially hazardous material.
- Vomit, faeces, urine, etc.

The above list includes perishable personal samples, the destruction of which is required by Section 64 of the Police and Criminal Evidence Act (1984).

B - Non-Perishable samples

The destruction of other, non-perishable personal samples is required by Section 64 of the Police and Criminal Evidence Act. These include:

- Control head hair samples.
- Control pubic hair samples.
- Finger nail samples.
- Casts- e.g of teeth or feet.

Except as below those non-perishable personal samples are returned to you as parts of exhibits for production at court, etc. The laboratory is not responsible for their destruction.

The part of these samples which were removed for examination, will be retained by the laboratory for the period of time as specified in the MOU for Retained Materials (3, 7 or 30 years) from the date of this notice to allow access to other legitimate parties. After this period, in the absence of written instruction to the contrary, the retained samples will be destroyed and a record made of their destruction.

Signed.

Dated 21st August 2007.

Page one of one

09-Processos Vol IX 2287 to 2288

09_VOLUME_IXa_Page_2287



THE FORENSIC SCIENCE SERVICE
WETHERBY LABORATORY, SANDBECK WAY, AUDBY LANE,
WETHERBY, WEST YORKSHIRE, LS22 7DN

FORENSIC REPORT

Officer in case: Det Supt Prior

Client: Leicestershire Police, New Parks

Police reference: 07/06085 Operation TASK

Laboratory reference: 300 655 190

Order reference: 400 922 755

Scientist: Lesley Denton

Number of pages: 2

Re: Abduction of Madeleine McCann on 3rd May 2007

09_VOLUME_IXa_Page_2288



A DNA profile has been obtained from the reference samples of
Amelie Eve McCANN (SBM/2) and Sean Michael McCANN (SBM/3).

In this case, all of the bands present in the profiles of both Amelie McCANN and Sean McCANN are represented in the combined profiles of Kate HEALY and Gerald McCANN. This is what I would expect to find if Amelie McCANN and Sean Michael McCANN were their natural children.

Neither the DNA profile of Amelie McCANN nor Sean McCANN matches that from the pillowcase (SJM/1) and therefore in my opinion, neither Amelie McCANN nor Sean McCANN can be the source of this profile.

If I can be of further assistance or you require a CJA statement please do not hesitate to contact me at the laboratory on 01937 548287.

Yours sincerely,

Lesley Ann Denton
FORENSIC SCIENTIST
Date: 28 June 2007

See also Madeleine's DNA

10- Processo 10 - VOLUME Xa; PDF page 123-124; Case file pages 2617-2618.

10VOLUME_Xa_Page_2617

Task 2618

From: "John H. ..." <John.H...@...>
To: "John H. ..." <John.H...@...>
Subject: "The Case"

Dear John,

I have read the L&A document you are referring to. It is a very good document and I am sure that it will be of great help to you in your work.

I am sure that you will find it very interesting and I hope that you will find it very helpful.

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10VOLUME_Xa_Page_2618

Task 2619

Dear John,

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10VOLUME_Xa_Page_2619

Task 2620

Dear John,

I have read the L&A document you are referring to. It is a very good document and I am sure that it will be of great help to you in your work.

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10VOLUME_Xa_Page_2620

Task 2621

Dear John,

I have read the L&A document you are referring to. It is a very good document and I am sure that it will be of great help to you in your work.

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10VOLUME_Xa_Page_2621

10VOLUME_Xa_Page_2621



Task Portugal

From: "Prior Stuart" <Stuart.Prior@leicestershire.pnn.police.uk>
To: "Task Portugal" <Task.Portugal@leicestershire.pnn.police.uk>
Sent: 04 September 2007 10:14
Subject: FW: Op Task - in Confidence

From: Lowe, Mr J R [mailto:John.Lowe@fss.pnn.police.uk]
Sent: 03 September 2007 15:01
To: stuart.prior@leicestershire.pnn.police.uk
Subject: Op Task - In Confidence

Stuart

Firstly, here are the last three results you are expecting

10VOLUME_Xa_Page_2622



An incomplete DNA result was obtained from cellular material on the swab 3a. The swab contained very little information and showed low level indications of DNA from more than one person. However, all of the confirmed DNA components within this result match the corresponding components in the DNA profile of Madeline McCann. LCN DNA profiling is highly sensitive it is not possible to attribute this DNA profile to a particular body fluid.

There is no evidence to support the view that Madeline MCCann contributed DNA to the swab 3B.

10VOLUME_Xa_Page_2623



A complex LCN DNA result which appeared to have originated from at least three people was obtained from cellular material recovered from the luggage compartment section 286C 2007 CRL10 (2) area 2. Within the DNA profile of Madeline McCann there are 20 DNA components represented by 19 peaks on a chart. At one of the areas of DNA we routinely examine Madeleine has inherited the same DNA component from both parents; this appears therefore as 1 peak rather than 2, hence 19 rather than 20. Of these 19 components 15 are present within the result from this item; there are 37 components in total. There are 37 components because there are at least 3 contributors; but there could be up to five contributors. In my opinion therefore this result is too complex for meaningful interpretation/inclusion.

Why - ...

Well lets look at the question that is being asked

"Is there DNA from Madeline on the swab "

It would be very simple to say "yes" simply because of the number of components within the result that are also in her reference sample.

What we need to consider, as scientists, is whether the match is genuine and legitimate; because Madeline has deposited DNA as a result of being in the car or whether Madeline merely appears to match the result by chance. The individual components in Madeline's profile are not unique to her, it is the specific combination of 19 components that makes her profile unique

above all others. Elements of Madeline's profile are also present within the the profiles of many of the scientists here in Birmingham, myself included. it's important to stress that 50% of Madeline's profile will be shared with each parent. It is not possible in a mixture of more than two people, to determine or evaluate which specific DNA components pair with each other. Namely, we cannot separate the components out into 3 individual DNA profiles.

Therefore, we cannot answer the question: is the match genuine or is it a chance match.

The same applies to any result that is quoted as being too complex for meaningful inclusion/interpretation

What questions will we never be able to answer with LCN DNA profiling -

When was the DNA deposited -

How was the DNA deposited -

What body fluid(s) does the DNA originate from -

Was a crime committed -

These, along with all other results, will be formalised in a final report

Please don't hesitate to contact me if you require any further assistance

kind regards

John

John Lowe Forensic Scientist

Major Incidents Team

Priory House

Inter Facility: 703 6973

External: 0121 607 6973

Fax: 0121 6221807

Please consider the environment before printing this e-mail

Forensic Science Service Ltd

Registered office and headquarters: Trident Court 2920 Solihull

Parkway, Birmingham Business Park, Birmingham B37 7YN United Kingdom.

Registered in England and Wales: number 5607780

The Forensic Science Service (r) is a trading name of Forensic Science

2642 to 2652 FSS report 6 Sept 2007 by John Lowe Info re UK A.C.P.O Cadaver dogs(Portuguese translation)

10-Processo 10 - VOLUME Xa; pages 2642 - 2652



10VOLUME_Xa_Page_2645



10VOLUME_Xa_Page_2646



10VOLUME_Xa_Page_2647



10VOLUME_Xa_Page_2648



10VOLUME_Xa_Page_2649



10VOLUME_Xa_Page_2650



10VOLUME_Xa_Page_2651



10VOLUME_Xa_Page_2652



10VOLUME_Xa_Page_2652a



2653 to 2660 FSS report 6 Sept 2007 by John Lowe Info re UK Cadaver dogs (Original English)

10-Processo 10 - VOLUME Xa; pages 2653-2660

10VOLUME_Xa_Page_2653



10VOLUME_Xa_Page_2654



10VOLUME_Xa_Page_2655



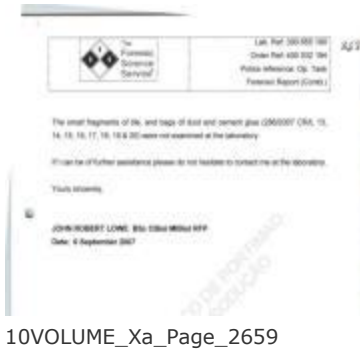
10VOLUME_Xa_Page_2656



10VOLUME_Xa_Page_2657



10VOLUME_Xa_Page_2658



10VOLUME_Xa_Page_2659

SOURCE: Processo 10 - VOLUME Xa; PDF page 160-165; Case file pages 2653-2658. FORENSIC REPORT

Officer in case: D/Supt PRIOR
Customer: New Parks Police Station,
Leicestershire Constabulary
Police reference: Operation Task
Laboratory reference: 300 655 190
Order reference: 400 932 184
Scientist: JOHN ROBERT LOWE
Number of pages: 6



10VOLUME_Xa_Page_2660

Re: the abduction of Madeleine McCann

This report summarises the results of DNA profiling tests conducted on a number of samples submitted to the Birmingham laboratory of the Forensic Science Service(R) from the Leicestershire Constabulary on behalf of the Pol - ia Judiciaria and Laboratorio De Policia Cientifica on 7th August 2007 This report is marked for the attention of Detective Superintendent Prior; however I understand and accept that the contents of this report will be shared with the necessary authorities in Portugal.

I have received from my colleague, Sarah Vraitich, copies of the reference DNA profiles of Gerald McCann (CB/1), Kate Healy (CB/2), Amelie McCann (SBM/2) and Sean McCann (SBM/3). I have also received a copy of the DNA profile obtained from the possible saliva staining on the pillow case (SJM/1) which is assumed to be the DNA profile of Madeleine McCann.



A weak incomplete DNA result which consisted of only a few unconfirmed DNA components was obtained from cellular material on the swab (3A) from the apartment floor. An attempt to obtain a DNA profile from any cellular material on the wet swab (3B) from the same area was unsuccessful in that no profile was obtained.

Weak and incomplete DNA results which consisted of only a few unconfirmed DNA components were obtained from cellular material on the wet and dry swabs (14A & B} from the back of the sofa.

A weak and incomplete DNA result which showed indications of having originated from more than one person was obtained from cellular material on the dry swab (15A) from the back of the sofa.

A DNA result which appeared to have originated from at least three people and which appeared to have originated from at least two males who had contributed the majority of the DNA was obtained from cellular material obtained from the wet swab of the sofa (15B). in my opinion there is no evidence to support the view that Gerald McCann or Madeline McCann contributed DNA to this result. The DNA from this swab has not been subjected to LCN DNA profiling tests.

A weak incomplete DNA result which consisted of only a few unconfirmed DNA components was obtained from cellular material recovered from the edges of tile 2 286/2007-CRL(2) from the apartment floor. An attempt to obtain a DNA profile from any cellular material recovered from a

further area on tile 2 and two areas on tile 3 (286/2007-CRL(3)) were unsuccessful in that no profiles were obtained.

A weak incomplete DNA result which consisted of only two unconfirmed DNA components was obtained from cellular material recovered from the hem of one of the blue curtains 286A/2007-CRL(16(2)) from the apartment.

An attempt to obtain a DNA profile from any cellular material recovered from one area of the plastic luggage component (286C/2007-CRL(10(2))) from the motor vehicle was unsuccessful in that no DNA profiles were obtained.

A low level mixed DNA result which appeared to have originated from at least two people was obtained from a second area of the plastic luggage component (286C/2007-CRL(10(2))) from the motor vehicle. In my opinion this result is too complex to interpret at this stage.

A low level mixed DNA result which appeared to have originated from at least three people was obtained from cellular material recovered from the fibre coated luggage component (286C/2007-CRL(10(1))) from the motor vehicle. In my opinion this result is too complex to interpret at this stage.

A low level incomplete DNA profile which matched the corresponding components in the DNA profile of Gerald McCann was obtained from cellular material on the key card (286C/2007-CRL(12)). This sample has not been sent for further testing using LCN DNA profiling tests.

Low level incomplete DNA results, which in certain circumstances showed a contribution of DNA from more than one person were obtained from biological material on the following swabs: 286A/2007 CRL 14a, 14b, 15a; the swab from the hem of the curtain 286A/2007 CRL 16 curtain 2; the swabs from the tile pieces 286/2007 CRL 2 areas 1 and 2 and 3 area 1. In my opinion there is no evidence to support the view that anyone from the McCann family contributed their DNA to them results.

An attempt to obtain an LCN DNA result from any cellular material on the swab from area one of the luggage compartment section (286C/2007 CRL 10) was unsuccessful in that no profile was obtained.

An incomplete LCN DNA result which appeared to have originated from a male was obtained from cellular material from the swab (286A/2007 CRL 1a & b). The profile did not match any of those previously tested in this case.

An incomplete LCN DNA result which appeared to have originated from a female was obtained from cellular material from the swab (286A/2007 CRL 4a & b). The profile did not match any of those previously tested in this case.

An incomplete LCN DNA result which appeared to have originated from a male was obtained from cellular material from the swab (286A/2007 CRL 9a & b). The profile did not match any of those previously tested in this case. Furthermore, it did not match the profile obtained from the swab, 286A/2007 CRL 1a & b.

Mixed LCN DNA results which appeared to have originated from at least two people were obtained from cellular material recovered from the swabs (286A/2007 CRL 2a & b, 5a 7 b, 7a & b, 10a & b and 12a & b). In my opinion there is not evidence to support the view that any of the McCann family contributed DNA to this result.

Attempts to obtain an LCN DNA result from any cellular material on the swabs 286A/2007 CRL 11a & b & 13a & b and from tile pieces 286/2007 CRL 3 area 2 were unsuccessful in that no DNA profiles were obtained; possibly due to the absence of sufficient good quality DNA.

LCN DNA results which contained too little information for meaningful interpretation were obtained from cellular material on the swabs 286A/2007 CRL 6a & b and 8a & b). LCN DNA results which appeared to have originated from at least three people and which were too complex for meaningful interpretation were obtained from cellular material recovered from the swabs taken from the tiles 286/2007 CRL 1, 6, 7,8, 10 & 11).

An attempt to obtain an LCN DNA result from any cellular material on the swabs from the tiles 286/2007 CR/L 5 stains 1, 2 & 3 were unsuccessful in that no DNA profile was obtained.

An LCN DNA result which contained too little information for meaningful interpretation was obtained from cellular material on the swab from the tile (286/2007 CR/L 9).

Low level LCN DNA results were obtained from cellular material on the swabs from the tiles (286/2007 CR/L 4 & 12). In my opinion there is no evidence to support the view that anyone in the McCann Family contributed DNA to these results.

An incomplete DNA result was obtained from cellular material on the swab (286A/2007 CRL 3a). The swab contained very little information and showed low level indications of DNA from more than one person. However, all of the confirmed DNA components within this result match the corresponding components in the DNA profile of Madeline McCann. LCN DNA profiling is highly sensitive; it is not possible attribute this DNA profile to a particular body fluid.

A low level LCN DNA result was obtained from cellular material on the swab (286A/2007 CRL 3b). In my opinion there is no evidence to support the view that Madeleine McCann contributed DNA to this result.

A complex LCN DNA result which appeared to have originated from at least three people was obtained from cellular material recovered from the luggage compartment section 286C 2007 CRL10 (2) area 2. In my opinion this result is too complex for meaningful interpretation.

The curtains (286A/2007 - CR/L 16 and 16B) and the piece of white curtain (286B/2007 - CR/L 1) and the fragments of bushes (286/2007 CR/L 21) were examined for the presence of blood. No blood was found.

The small fragments of tile, and bags of dust and cement glue (286/2007 CR/L 13, 14, 15, 16, 17, 18, 19 & 20) were not examined at the laboratory.

if I can be of further assistance please do not hesitate to contact me at the laboratory.

Yours sincerely,

JOHN ROBERT LOWE BSc CBiol NliBiol RFP

Date: 6 September 2007

Processos Vol X Pages 2659 - 2660

Note: This an annex to the Lowe report dated 6th September 2007. In English.

The Forensic Science Service

Forensic Examination Record

Client reference: 07/06085

Laboratory Reference: 300 655 190

Order Reference: 400 932 184

Identifying mark for this document: JRL/FER/1

NOTE: Work was carried out by trained assistants using established procedures. A full record of the contribution made by assistants is contained in the case file, which comprises notes made at the time of the examination.

Number of assistants used: 29

If assistants used please state.

Name Brief details of work done

DNA Analysis:

Bonney A, Chin C, Thomas D, Chrities E, Hutchin J, Sohat K, Pelleymounter L, Dhillin M, Doran R, Hetherington R, Waheed R, Taylor GL, Briscoombe H.L., Hodson JA, Deighton JA, Halton KJ, Naughton, LM, O'Brien MJ, Fairless NLM, Day RG, Riley SC, Hobson S, Schofield SA, Khan S, Leadbeater R, Parkes S, Grange F, Evans M, Harris M, Pryor S, Fergusson-Hunter A, Bartlett R,

General Examination and Note taking:

Coniry L, Cowdry D, Shaw LM, Shaw KH.

Criminal Procedure Rules 27 1 (1) Criminal Justice Act 1967 9 Magistrates's Court Act 1980 s %B

I identify this exhibit as that referred to in the statement made and signed by me.

Name: John Robert Lowe

Date: 06-09-07

For court use only:

Rv
Exhibit number
Signed date

Justice of the peace/clerk to Court

Page 1 of 1

Processos Vol X
Page 2660

The Forensic Science Service

Expert's Index of Unused Material

FSS References : 300 655 190/400 932 184

CJS URN

Index compiled by John Robert Lowe BSc Cbiol MIBiol RFP

The following is a list of unused material in the possession of the Forensic Science Services and being managed in this case by the above named expert (note, the material should be considered to be NON - SENSITIVE, unless a specific flag exists to suggest it might be SENSITIVE). The list is provided in accordance with the guidance given in 'Disclosure: Expert's evidence and unused material' Guidance Booklet for Experts?.

EXPERT'S USE

Number Description of material

1. CASE NOTES made at the time of the examination of the items: provide details of dates of examinations; details of packaging and integrity of items; records of work performed on the items, who was involved and dates; analytical and test results; details of quality checks

Location: Case Files.

2. DRAFT REPORTS ' electronic and/or hard copy drafts of reports of statements sent out to the Prosecution Team.

Location: Case Files.

3. ADMINISTRATIVE DOCUMENTS time recording sheets, case costings, delivery notes, invoices, records of enquiries with customers relating to costs, etc.

Location : Case Files.

4. RECORDS of material submitted but not examined, of material examined but relating to suspects not included in reports or statements; of work carried out by others, including the results; of procedures and techniques used during the examinations.

Location: Case Files.

5. RETAINED MATERIALS, material from items (list), Hairs recovered from the fragments of bushes, tapings from the curtains, CDs of photos supplied from Portugal, DVD of scene examination supplied from Portugal, Photographs and CD of LMG + stain on tile 286/2007 CR/L 5.

Location: Case Files.

6. ADDITIONAL INFORMATION in the form of maps, plans, photographs, videos relating to the scene of the offence, details of modus operandi, details of related offences.

Location: Case Files

Completed by John Robert Lowe BSc Cbiol MIBiol RFP

Signed (Unsigned copy)

Dated 06-09-2007

Page 1 of 1

3465 to 3466 FSS Items for Return FFS

13-Processo 13 P. 3465 - 3466

13_VOLUME_XIIIa_Page_3465

The screenshot shows a document titled "ITEMS FOR RETURN" with a table containing item numbers and descriptions. The table has columns for "Item", "Number", "Date", and "Number". The items listed are:

Item	Number	Date	Number
1	10-21	10-21	26
2	10-22	10-21	7
3	10	10-21	24
4	10	10-21	24
5	10	10-21	24
6	10	10-21	24
7	10	10-21	24
8	10	10-21	24
9	10	10-21	24
10	10	10-21	24
11	10	10-21	24
12	10	10-21	24
13	10	10-21	24
14	10	10-21	24
15	10	10-21	24
16	10	10-21	24
17	10	10-21	24
18	10	10-21	24
19	10	10-21	24
20	10	10-21	24
21	10	10-21	24
22	10	10-21	24
23	10	10-21	24
24	10	10-21	24

13_VOLUME_XIIIa_Page_3465

The screenshot shows a document titled "ITEMS FOR RETURN" with a table containing item numbers and descriptions. The table has columns for "Item", "Number", "Date", and "Number". The items listed are:

Item	Number	Date	Number
11	10	10-21	24
12	10	10-21	24
13	10	10-21	24
14	10	10-21	24
15	10	10-21	24
16	10	10-21	24
17	10	10-21	24
18	10	10-21	24
19	10	10-21	24
20	10	10-21	24
21	10	10-21	24
22	10	10-21	24
23	10	10-21	24
24	10	10-21	24
25	10	10-21	24
26	10	10-21	24
27	10	10-21	24
28	10	10-21	24
29	10	10-21	24
30	10	10-21	24
31	10	10-21	24
32	10	10-21	24
33	10	10-21	24
34	10	10-21	24
35	10	10-21	24
36	10	10-21	24
37	10	10-21	24
38	10	10-21	24
39	10	10-21	24
40	10	10-21	24

Return of samples.

Cross-reference to Lowe(final) and Palmer reports:

Delivery 286: 24 items listed

- All referenced in Lowe(final);
- Items 1-20 all NON-perishable; No record found of their having been returned to PT;
- Items 21-24 perishable - profiles obtained from 3; bush unfruitful.

Delivery 286A: 33 items listed

- All referenced in Lowe(final);
- Items 1-15 A&B (30 items) all perishable;
- Items 16 (2 pieces) and 16B (curtains) not perishable; No record found of their having been returned to PT.

- Item 16 (one blue curtain) and 16B (white curtain) not tested.

Delivery 286B: 1 item listed

- Referenced in Lowe(final);
- (curtain section) not perishable and not tested. No record found of it having been returned to PT.

Delivery 286C: 34 items listed

- Items 1D, 2E, 10, 12 and 14 (profile) referenced in Lowe(final);
- Items 1-9, 11 (all hairs and fibres) referenced in Palmer report;
- Items 13 and 15 not referenced in either report;
- Item 14 perishable;
- Items 1-13 and 15 non-perishable: and record found of their return to PT.

Overall Summary:

- 92 items listed;
- 90 items referenced in the two reports;
- 35 items perishable, presumed consumed, stored or destroyed per FSS rules;
- 33 non-perishable items: record found of their return;
- 24 non-perishable items: no record found of their return;
- 3 items not tested;
- 2 items not referenced in either report (286C: 13 and 15).

Question: Are there other return records for deliveries 286 (20 items), 286A (3 items) and 286B (1 item) -

3472 - Letter 7 November 2007 (in English) to Director of the FSS regarding fibres found in Renault Scenic

3473 - Portuguese version of page 3472

13 Processos Vol XIII Page 3472 to 3473

13_VOLUME_XIIIa_Page_3472



13_VOLUME_XIIIa_Page_3473

Letter in English (PT version is on page 3473) Letter is repeated on page 3488, showing Lowe's signature of receipt, 29-07)

To the Director of the FSS
Birmingham

Date: 28 11 07

Reference n? 201/07.O GALGS
Inspector: Joao Carlos

Subject: Disappearance of the British Child, Madeleine Beth McCann ? Request for forensic examination



This inquiry investigates the disappearance of the British child, Madeleine Beth McCann, which occurred on May 3rd, 2007 in Praia da Luz, Lagos.

On the occasion of the examination of the metal grey vehicle Renault Scenic, bearing the number plate ?59-DA-27?, possible fibres were collected, in different areas of the car, that were submitted to your forensic laboratory by means of delivery note n? 286C/2007 ? CR/L.

We kindly request that the collected material be used to carry out the analysis and identification of possible fibres, as well as their comparison with a two-piece pyjamas similar to the ones the child was wearing at the time she went missing.

Please find enclosed to this official letter, for the mentioned purposes, the two piece pyjamas referred to in the previous paragraph (Delivery Note n? 397/2007-CR/L).

Yours faithfully,

Criminal Investigation Senior Coordinator

Paolo Rebelo.

3578 to 3582 List of vestiges collected from 5A and examined by FSS
3583 to 3590 Final proposed English version of pages 3940-3949 plus e-fit of "sunglasses-man"

13-Processos Vol XIII Pages 3578 to 3590

13-Vol XIII pages 3940 to 3948

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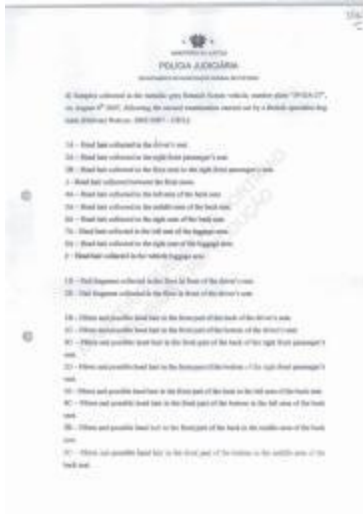
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Same text also in .

(Note: There is no date for this correspondence, neither is there a reference as to whom it is addressed).

a. List of samples collected from 5A and examined and report of events and evidence collected

On May 3rd 2007, under unknown circumstances, a child - Madeleine Beth McCann - went missing from the apartment she was sharing with her parents, brother and sister, at the resort - Ocean Club - , located in Praia da Luz, Lagos.

At a first stage of the investigation, confronted with the disappearance, while considering that the child could have walked out of the apartment, on her own, and could have got lost in the area, the abduction theory was the one which achieved more consistency, partly due to the parents suspicions. After police intervention, the searches already started furthered and progressively enlarged to gradually farther distant area, with the involvement of search dog teams and numerous human resources.

During that stage of the investigation, the apartment was searched by members of the Crime Scene Team from the Laboratorio de Policia Cientifica [Police Forensic Science Laboratory] of the Portuguese Criminal Police, and samples were collected. Those samples, namely hair and a sperm stain, were sent to the National Institute of Legal Medicine (INML) to be analysed taking into account the DNA profile of the missing child-that had been provided-, as well as one of her parents and the ones of friends who belonged to a common group, and who went to the above mentioned tourist resort following previous arrangements among them.

Following the forensic tests carried out at INML, some DNA were obtained which linked profiles of some people within the group of friends, to the profiles of the child - s parents and even to the profiles of other people at the site. Until this moment, unidentified mitochondrial DNA profiles were also obtained. On the other hand, it was possible to define the autosomic STR profile of the sperm stain detected on the bedspread of one of the beds in the bedroom from where the child went missing. It has been already checked that there is no matching between the obtained genetic profile and the profile of the various samples of reference, which include the ones of the parents, friends, and others. Therefore, that DNA profile is now being forwarded to you, so that it can be inserted in your database, with the request that you check if it matches any of the genetic profiles from 3 British citizens who had stayed in the apartment in question, before the McCanns started to use that apartment on May 3rd, 2007.

Thus, and considering the submitted samples, which preliminary report has already been forwarded to us, and in order to provide a better outline and classification, we hereby indicate the data and the circumstances of that sample collection. Furthermore, we also enclose some queries which answers we would like you to include in your final report. We are looking forward to receiving it and we appreciate it could be submitted to us as soon as possible.

b) Samples collected in the living room of the apartment 5A, block A, Ocean Club, tourist resort - Praia da Luz, Lagos, on August 1st, 2007, following the examination carried out by a British specialist dog team. Delivery note no. 286/2007 - CR/L):

1. Pieces of tile number 1.
2. Pieces of tile number 2.
3. Pieces of tile number 3.

4. Pieces of tile number 4.
5. Pieces of tile identified next to tile number 1.
6. Pieces of skirting board number 1.
7. Pieces of skirting board number 2.
8. Pieces of skirting board identified between skirting boards 2 and 3.
9. Pieces of skirting board number 3.
10. Pieces of skirting board number 4.
11. Pieces of the skirting board identified next to skirting board 1.
12. Pieces of the skirting board identified next to skirting board 4.
13. Residues/small fragments from the area of the collected skirting boards.
14. Residues/small fragments from the area of the collected tiles.
15. Existing grout between the tiles and the upper area of the collected tiles.
16. Existing grout around tile 1.
17. Existing grout around tile 2.
18. Existing grout around tile 3.
19. Existing grout around tile 4.
20. Residues of tiles, cement-glue and existing grout in the area from where the tiles were collected.
21. Fragments of bushes.

Mouth swabs collected from the below mentioned crime scene examiners are also added hereby. Those examiners carried out the sample collections aimed at identifying possible contamination.

22. Two mouth swabs from Fernando Jose Silva Viegas.
23. Two mouth swabs from Lino Manuel Lima Henriques.
24. Two mouth swabs from Bruno Jorge P Ossidonio Mendes Antunes.

b) Samples collected in the living room of the apartment 5A, block A, Ocean Club, tourist resort, Praia da Luz, Lagos, on August 3rd, 2007, following the second examination carried out by a British specialist dog team (Delivery note no. 286B/2007-CR/L):

1. A piece of fabric from white curtain next to a window in the living room.
- C) Samples collected in the living room of the apartment 5A, block A, Ocean Club tourist resort, Praia Da Luz, Lagos, on August 4th, 2007, following the second examination carried out by a British specialist dog team (Delivery note no. 286A/2007-CR/L):
- 1A. Stain on the floor collected using a dry swab.
 - 1B. Stain on the floor collected using a swab, wet with distilled water.
 - 2A. Stain on the floor collected using a dry swab.
 - 2B. Stain on the floor collected using a swab, wet with distilled water.
 - 3A. Stain on the floor collected using a dry swab.
 - 3B. Stain on the floor collected using a swab, wet with distilled water.
 - 4A. Stain on the floor collected using a dry swab.
 - 4B. Stain on the floor collected using a swab, wet with distilled water.
 - 5A. Stain on the wall using a dry swab.
 - 5B. Stain on the wall collected using a swab wet with distilled water.
 - 6A. Stain on the floor collected using a dry swab.
 - 6B. Stain on the wall collected using a swab wet with distilled water.
 - 7A. Stain on the floor collected using a dry swab.
 - 7B. Stain on the wall collected using a swab wet with distilled water.
 - 8A. Stain on the floor collected using a dry swab.
 - 8B. Stain on the wall collected using a swab wet with distilled water.
 - 9A. Stain on the floor collected using a dry swab.
 - 9B. Stain on the wall collected using a swab wet with distilled water.

- 10A. Stain on the floor collected using a dry swab.
- 10B. Stain on the wall collected using a swab wet with distilled water.
- 11A. Stain on the floor collected using a dry swab.
- 11B. Stain on the wall collected using a swab wet with distilled water.
- 12A. Stain on the floor collected using a dry swab.
- 12B. Stain on the wall collected using a swab wet with distilled water.
- 13A. Stain on the floor collected using a dry swab.
- 13B. Stain on the wall collected using a swab wet with distilled water.
- 14A. Stain in the rear of a sofa collected using a dry swab.
- 14B. Stain on the wall behind a sofa collected using a swab wet with distilled water.
- 15A. Stain in the rear of a sofa collected using a dry swab.
- 16. Two curtains made of blue fabric.
- 16B. One curtain made of white fabric, and a blue coloured tieback.

d) Samples collected in the metallic grey Renault Scenic vehicle, number plate 59-Da-27, on August 6th, 2007, following the second examination carried out by a British specialist dog team (Delivery note no. 286C/2007-CR/L):

- 1A. Head hair collected from the driver - s seat.
- 2A. Head hair collected to the right of passenger - s seat.
- 2B. Head hair collected from the floor next to the right front passenger - s seat.
- 3. Head hair collected between the front seats.
- 4A. Head hair collected from the left area of the back seat.
- 5A. Head hair collected from the middle area of the back seat.
- 6A. Head hair collected from the right area of the back seat.
- 7A. Head hair collected from the left seat of the luggage area.
- 8A. Head hair collected from the right seat of the luggage area.
- 9. Head hair collected from the vehicle luggage area.

- 1D. Nail fragment collected in the floor in front of the driver - s seat.
- 2E. Nail fragment collected in the floor in front of the driver - s seat.

- 1B. Fibres and possible head hair from the back of the driver - s seat.
- 1C. Fibres and possible head hair from the bottom of the driver - s seat.
- 2C. Fibres and possible head hair from the back of the right front passenger - s seat.
- 2D. Fibres and possible head hair from the bottom of the right front passenger - s seat.
- 4B. Fibres and possible head hair from the back in the left area of the back seat.
- 4C. Fibres and possible head hair from the bottom in the left area of the back seat.
- 5B. Fibres and possible head hair from the back in the middle area of the back seat.
- 5C. Fibres and possible head hair from the bottom in the middle area of the back seat.
- 6B. Fibres and possible head hair from the back in the right area of the back seat.
- 6C. Fibres and possible head hair from the bottom in the right area of the back seat.
- 7B. Fibres and possible head hair from the back of the left seat in the vehicle luggage area.
- 7C. Fibres and possible head hair from the bottom in the left area of the back seat.
- 8B. Fibres and possible head hair from the back of the right seat in the vehicle luggage area.
- 8C. Fibres and possible head hair from the bottom of the right seat in the vehicle luggage area.
- 11. Fibres and possible head hair in the rear shelf/luggage cover.
- 13. Pattern sample of the fabric covering the vehicle seats.

Material identified during the inspection carried out by the specialist dog team:

- 10. Parts of the vehicle luggage area.

12. Vehicle ignition key.

We also enclose mouth swabs and pattern samples taken from the clothes worn by the Portuguese fingerprint expert, Pedro Miguel Filipe Goncalo Vilhena, who drove the vehicle under examination, with a view to allowing for possible contamination screening.

14. Two mouth swabs from Pedro Miguel Filipe Goncalo Vilhena.

15. Pattern samples taken from the clothes worn by Pedro Miguel Filipe Goncalo Vilhena.

Queries:

As for trace evidence in the Delivery Note no. 286/207-CR/L is regarded, we request that:

- the biological traces concerning items 1 to 20 be researched, and their nature and respective DNA profiles determined (if possible).
- the blood traces concerning item 21 be researched, and their respective DNA profiles determined.

As far as the trace evidence in the Delivery Note no. 286B/2007 - R/L is concerned, we hereby request that any biological evidence be researched, and its nature and respective DNA profiles determined (if possible).

As for the trace evidence in the Delivery note no. 286A/2007-CR/L, we request that

- The nature of biological trace evidence concerning items 1A to 15B be determined (if possible), as well as its respective DNA profiles.
- The biological trace evidence regarding items 16 and 16B be researched, and its nature and respective DNA profiles determined (if possible).

As regards the trace evidence in the Delivery Note no. 286C/2007-CR/L, we hereby request you to:

- Determine whether head hair samples 1A, 2A, 2B, 3, 4A, 5A, 6A, 7A, 8A, and 9, as well as occasional head hairs contained in items 1B, 1C, 2C, 2D, 4B, 4C, 5B, 5C, 6B, 6C, 7B, 7C, 8B, 8C, and 11 originate from ante mortem or post-mortem deposition;
- Determine its respective DNA profiles, as well; and in case some of these samples are identified as belonging to the missing child, provide a toxicological research for any medicinal substances present therein;
- Determine the respective DNA profiles regarding items 1D and 2E;
- Research biological trace evidence concerning items 10 and 12, and determine (if possible) its biological nature and respective DNA profiles;
- Compare fibres present in items 1B, 1C, 2C, 4B, 4C, 5B, 5C, 6B, 6C, 7B, 7C, 8B, 8C, and 11 with the pyjamas items in the Delivery Note no. 397/2007-CR/L. taking into account the standard samples from the fabric covering the vehicle seats (items 13) and the vehicle driver - s clothing (items 15).

We further request the DNA profile comparison concerning the English citizens that stayed in the apartment throughout 2007, where the above-referred sperm stain was found.

-FAWKES, SIMON ANDREW

-DAMBROSIO, CARLO

-GORDON, PAUL ANTHONY

With the DNA profile

D3S1358 15-18 CSFIPO 10-11

HUMTHOI 9.3 Penta D 9

D21511 29-32.2 VWA 18
D18551 17-18 D8S1179 12-13
Penta E 7-8 TPOX 11
D5S818 12-13 Fibra 20-24
D13S317 12-14 D2SI338 18-25
D75820 10-12 D19S433 13-15
D16S539 11 Amelogenine XY

Obtained by the INML, IP from a bedspread of a bed located next to the window of the children - s bedroom in Apartment 5A, block A, in the Ocean Club, tourist resort, Praia da Luz, Lagos, with the results obtained by this laboratory.

At last, we request a reply as regards the previous queries concerning the collected mouth swabs from NEIL BERRY and RAJINDER RAJ SING BALU, as well as their DNA profiles comparisons with the results obtained in that laboratory, and also the comparison with the mitochondrial DNA profiles already submitted.

Best Regards,
Criminal Investigation Superior Coordinator

Paulo Rebelo

*****Page 3590*****

Further to our previous message regarding dates and circumstances concerning the collection of the evidence to be examined in your laboratory, along with the enclosed queries, we further inform you that a pair of pyjamas will be later handed over (delivery note 397/2007-CR/L), similar to those Madeleine Beth McCann was wearing when she went missing.

Best regards,
Criminal Investigation Superior Coordinator

Paulo Rebelo

3933 Email from Paiva to Stuart Prior re: questions to ask the FSS 2007.10.31

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13_VOLUME_XIIIa_Page_3933



Ricardo Manuel Gon - Ives Paiva

De: Ricardo Manuel Gon - Ives Paiva
Enviado: quarta-feira, 31 de Outubro de 2007 17:20
Para: 'Prior Stuart'
Assunto: Madeleine McCann's investigation - Questions to the Birmingham Laboratory
Anexos: Ricardo Manuel Gon - Ives Paiva.vcf; Solicita - o exames Inglaterra.doc; Informa - o remessa pijama para inglaterra.doc

Hello, good afternoon Stuart!

As previously agreed with you on the phone, here I send the

questions

to be officially posed to the Forensic Laboratory of Birmingham, that

will be included in the Letter of Request.

Best regards,

Inspector Ricardo Paiva

[3949](#) Letter from Rebelo re: analysis of pyjamas (English)

13-Processos Vol. XIII page 3949

13_VOLUME_XIIIa_Page_3949



Further to our previous message regarding dates and circumstances concerning the collection of the evidence to be examined in your laboratory, along with the enclosed queries, we further inform you that a pyjamas will be later handed over (delivery note 397/2007-CR-L), similar to the one Madeleine Beth Mc Cann was wearing when she went missing.

Best regards
Criminal Investigation Superior Coordinator
(Paulo Rebelo)

[94 to 96](#) FSS Forensic report re DNA Madeleine's pillowcase (English)

01-01-Outros Apenso 01 file1 pdf-01 pages94 to 96

also Processos Vol IX Page 2289

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01_volume_I_o_apenso_I_Page_96



The Forensic Science Service -

Wetherby Laboratory, Sandbeck Way, Audby Lane, Wetherby, West Yorkshire, LS22 7DN

FORENSIC REPORT

Officer in case: Det Supt Prior

Client: Leicestershire Police, New Parks

Police reference: 07/06085 Qperation TASK

Laboratory reference:

Order reference: 300 555190

Scientist: 400 913 609

Scientist: LESLEY DENTON

Number of pages: 2

Re: Abduction of Madeleine McCann on 3rd May 2007

A DNA profile has been obtained from the reference samples of Kate HEALY (51162896) and Gerald McCANN (51162897).

A DNA profile has also been obtained from a pillowcase (SJM/1).

DNA profiling reveals a series of bands, half of which a child inherits from their natural mother (maternal) and half of which inherits from their natural father

(paternal)

In this case, all of the bands present in the profile of obtained from the pillowcase are represented in the combined profiles of Kate HEALY and Gerald McCANN. This is what I would expect to find if the profile obtained from the pillowcase originated from a natural child of theirs.

The results of the DNA profile obtained from the pillowcase is approximately 29 million times more likely if the profile originates from a natural child of theirs rather than someone unrelated to them.

In my opinion, the results detailed above provide extremely strong support for the view that the profile obtained from the pillowcase originated from a natural child of Kate HEALY and GERALD McCANN.

Please note: I understand that the McCANN's have a second female child. It therefore remains a formal possibility that the DNA on the pillowcase could have originated from her as the genetics would be in keeping with those described above.

If I can be of further assistance or you require a CJA statement please do not hesitate to contact me at the laboratory on 01937 548287.

Yours sincerely

Lesley Anne Denton
FORENSIC SCIENTISTS
Date: 28 June 2007

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Outros Apensos pdf01 page97 (96)
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FSS - The Forensic Science Service

Destruction of Samples

(Related Document: FSS-GP-050)

Code: Client reference: URN 07106085 Laboratory reference: 300 655 190
Investigating Officer: Det Supt Prior Order reference: 400 913 609

A - Perishable Samples

Certain samples constitute a potential health risk. With the concurrence of the Home Office, it has been decided that such samples will not be submitted to the Courts unless specifically requested by the Defence (This is an extension of the procedures for the disposal of blood samples previously agreed by the Lord Chief Justice, the Director of Public Prosecutions and the former Chief Metropolitan Magistrate.)

The Laboratory has examined one or more of the samples listed below. They will not be returned to you but will be destroyed in due course unless we are requested by the Defence to preserve them. You should notify the Defence Solicitors in accordance with Home Office Circulars 40/73 and 74/82, which allow a period of 21 days in which notice in writing must be given, by the defendant or his legal representative, to the laboratory to prevent the samples being destroyed.

- Blood samples
- Saliva samples
- Swabs from body orifices
- Other swabs bearing potentially hazardous material
- Vomit, faeces, urine, etc

The above list includes perishable personal samples, the destruction of which is required by Section 64 of the Police and Criminal Evidence Act, (1984).

B - Non-Perishable Personal Samples

The destruction of other, non-perishable, personal samples is required by Section 64 of the Police and Criminal Evidence Act, (1984). These include:

- Control head hair samples
- Control pubic hair samples

- Finger nail samples
- Casts, e.g. of teeth or feet

Except as below these non-perishable, personal samples are returned to you as parts of exhibits for production at court etc. The laboratory is not responsible for their destruction.

The part of these samples, which were removed for examination, will be retained by the laboratory for the period of time as specified in the 'Memorandum of Understanding for Retained Materials' (3, 7 or 30 years) from the date of this notice to allow access to other legitimate parties. After this period, in the absence of written instruction to the contrary, the retained samples will be destroyed and a record made of their destruction.

Signed:

Date: 21 August 2007

FSS-GF-247, Page 1 of 1, Issue 4

[300 to 326](#) Translation of FSS statement John Robert Lowe 2008.07.18

01-02-OUTROS APENSOS I, volume II, Pages 300-325

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Manual Pages 300-326
PDF ref: 02-volumeII-apensoI-pages18-43

TRANSLATION

Witness deposition

(Criminal Procedure Rules, r27.1 (1);
Criminal Justice Act 1967, s.9; Magistrates' Courts Act 1980,
s.5B)

Deposition of: JOHN ROBERT LOWE BSc CBIol MIBiol RFP Age:
Older than 18

Profession of Witness: Forensic Scientist

Address of Witness:

Forensic Science Service Ltd.,
Birmingham Laboratory, Priory House, Gooch Street North,
Birmingham, B5 6QQ

With respect to:

References FSS: 300 655 190 / 400 947 125
References Client: 07/06085, 201/07.0GALGS
CJS URN:

I declare that:

This deposition (consisting of twenty two pages signed by me) corresponds to the truth, to the best of my knowledge, and I give it knowing that, if it is presented as evidence, I could be subject to [lit: the target of] penal action in the case I had deliberately declared something that I knew to be false or that I thought was not the truth;

I declare also that,

I am expert in the area of forensic sciences and that I was asked to give a deposition. I confirm that I have read the directions [*guidance*] in the pamphlet *Disclosure: Expert's evidence and unused material* [*Divulgacao: provas periciais e material nao utilizado*] that specifies my functions and documents my responsibilities, with respect to the quality of the disclosure of an expert witness. I followed that guidance and understand the ongoing nature of my responsibilities in terms of disclosure. In accordance with my duties of disclosure, as documented in the guidance pamphlet, I:

a. confirm that I complied with my duty to record, to conserve and to divulge material, in accordance with the Law relating to Investigations and the Penal Process, of 1996, as amended;

b. compiled an index of all the material. I assure that such index will be updated in the case additional material is delivered to me or comes forth [emerges];

c. am advised that in the case my opinion changes relative to any determining [decisive/conclusive] question, I am obligated [obliged] to inform the person responsible for the investigation, as soon as possible, presenting him with my reasons.

Signed: [Signature appended]

Data: **18 Junho 2008**

FSS-GF-679 Emissao 2, Pagina 1

Qualifications and Experience

I have a degree in Sciences in the areas of Microbiology and Biochemistry. I am a Chartered Biologist [Note: the highest status achievable by a professional biologist], a member of the Institute of Biology, a forensic doctor enrolled in the Order and a forensic scientist in the Birmingham Laboratory of the Forensic Science Service. My area of specialty is the examination of biological evidence including the analysis of spots of body fluid and the interpretation of DNA profile results.

Information

Based on the information furnished by the Leicestershire Constabulary and the Pol - ia Judiciaria, I was informed that, allegedly, on 3 May 2007 Madeleine McCann disappeared from apartment 5A, Ocean Club, na Praia da Luz, Lagos, Portugal.

My examinations, interpretations and conclusions are in line with the statements of information available during the examination. In the case there are alterations relating to that information, I shall have to reconsider the conclusions that I drew in the light of the new circumstances. Additional information will have to be furnished prior to any trial.

Receipt of the objects

Some of the objects that were collected from apartment 5A and from a vehicle, Renault 'Scenic' (matricula 59-DA-27), hired by Gerry e Kate McCann when they were in Portugal. Those objects were delivered to the Forensic Science Service(R) by the Police Science Laboratory.

FSS-GF-679 Emissao 2, Pagina 2

At the same time, reference samples from those Portuguese police officers who had been active in the crime scene were delivered.

The Forensic Science Service(R) received the [above] objects on 7 August 2007, in sealed, secure packages.

On 8 August 2007, the Forensic Science Service(R) received a piece of cloth/cotton wool (object MJN994) from Leicestershire Constabulary. That object was inside a sealed package.

On 12 October 2007, the Forensic Science Service(R) received a blood spot in a cardboard frame (object JRB/1) from Leicestershire Constabulary. That object was inside a sealed package.

Objective

Th objective of the laboratory examination was to examine the presented objects with respect to the presence of blood, cellular material and hair that may prove to be [have been] from Madeleine McCann or one or other member of her family, or from any of the Portuguese

police who had been active [working/present] at the crime scene.

Technical questions

Establishment of the DNA profile

In this case two types of DNA analysis were used: the standard technique called SGM+ and a more precise one called Low Copy Number (LCN).

FSS-GF-679 Emissao 2, Pagina 3

Both techniques look at the same regions of DNA, thereby allowing a comparison to be made between DNA profiles obtained through SGM+ with those obtained through LCN.

Establishment of the DNA profile through SGM Plus

DNA is a complex chemical found in almost every cell of the human body. It carries genetic information that determines the physical and chemical characteristics of a person.

DNA analysis uses a technique in which specific regions [areas] are seen and copied (or amplified) many times. A DNA profile obtained from biological material, such as blood, semen, saliva or hair may be compared with a DNA profile obtained from a reference sample of any person. In the case that the DNA profile of the particular person is different from the DNA profile of the biological material, then that person is not the source of that material. If the profiles are equal [match], then that person, together with other persons having the same DNA profile, may be considered as a potential source of the material.

The significance [import] of a match may then be analysed in relation to the probability of obtaining that match by chance.

Establishment of the DNA profile through LCN

i) in this case, the protocols used on samples collected from a crime scene serve, essentially, to increase the precision of the [chemical] reactions in the establishment of the DNA profile and, consequently, to increase the possibility to detect extremely small quantities of DNA in a sample. This is achieved through increasing the number of amplification cycles.

FSS-GF-679 Emissao 2, Pagina 4

ii) These procedures to establish a DNA profile are applied in the laboratory when routine tests that require a minimum quantity of DNA to be extracted have proven to be, or are considered, inappropriate for successful analyses of a specific sample. This may have to [be done with] a small quantity of cellular material available for tests and/or [due to] the condition of the spot [speck], that can affect the quality of DNA and its effective [efficient] amplification.

iii) Increasing the number of amplification cycles has the effect of significantly increasing the sensitivity of the technique, such that, theoretically, only some [a few] cells are necessary for a successful analysis. The profiles generated in this way should [must] be interpreted in relation to the circumstances of the case and, in particular, to the possibility of detection of quantities of vestigial DNA originating from unknown sources.

iv) A observacao de perfis STR mistos (isto e, de mais de um individuo) pode ser prevenida quando estas condicoes se verificam.

TRANSLATOR'S NOTE: This sentence can have several meanings. The literal translation is:

"The observation of mixed STR profiles (that is, from more than one person) may be prevented when those conditions occur."

If, however, the writer is intending to convey a linkage with his previous paragraph, it can be translated as:

"Mixed DNA profiles may be predicted [alternative meaning of 'prevenir': to warn; to forewarn] when those conditions [from the previous paragraph, i.e. the possibility of unknown sources] occur."

We would need to see the actual English report written by Lowe to understand his intended meaning.

Experimental data is available that permits a scientist to assess some questions relating to the transference and persistence of low-level DNA in objects and if they can be put together in [whether they - the questions/assessments - are relevant to] this case. Hence, consideration must be given to the manner in which the detected DNA was transferred to the object and, consequently, the relevance of the discovery of the corresponding DNA profiles to those individuals concerned.

TRANSLATOR'S NOTE: The entire paragraph above was fraught with difficulty, mainly because of its relevance and importance when we read several of Lowe's analyses later on in the report. The encountered difficulty raised the question in my mind as to whether the English-to-Portuguese translator, Lieve van Loock, simply converted written words - as I am attempting to do in reverse - or if (s)he actually had access to Lowe in order to question his intended meaning. If the former then (s)he, like me, was faced with the need to decide on an intended meaning before selecting the words to be written in the translation. In other words, I could be attempting to translate a mis-translation of the original English. Having said that, however, the above difficulty does not detract from the interpretation of what Lowe said in his individual analyses, as we shall see later.

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v) All the preparations of DNA were done in duplicate, conforming to procedure when protocols pertaining to increased sensitivity are applied. It [this] is required [in order] to attain reproducible results before the strips of DNA observed in the profiles will be considered as a true representation of the DNA present in this [the] sample.

My interpretation(s), conclusions and methods of work took into account all of the above aspects.

[Alternatively: I was mindful of all the above aspects when performing my work, when making my interpretations, and drawing my conclusions.]

In the appendix at the end of this statement additional details are furnished about the procedures used in obtaining the DNA profiles.

Analysis and Results

I performed analyses in this case with the help of scientific support personnel. A list of those people was made in the Record [register] of Forensic Examination, which I present as object [document] JRL/FER/1a. A complete record of work performed, with notes made at the time of the work, exists under the reference 300 655 190. Those notes are available for verification [examination] in the laboratory, if required.

Oral swabs of reference material

CB/1 Gerald McCann
CB/2 Kate McCann (nee Healy)
SBM/2 Amelie McCann

SBM/3 Sean McCann

My colleague, Sarah Vraitch, furnished me with copies of reference DNA profiles of the above individuals. Each of the profiles was different from the others.

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14 Pedro Vilhena
286/2007CRL22 Fernando Viegas
286/2007CRL23 Lino Henriques
286/2007CRL24 Bruno Antunes

The DNA profiles of these persons were obtained from their respective samples. The profiles were not only different from each other, they were different from those of the McCann family.

Reference sample of blood

JRB/1 Madeleine McCann
From this sample was obtained a DNA reference sample that was different from those of her immediate family, described above. This DNA profile was the same as that obtained from possible spots of saliva existing on the pillowcase (SJM/1).

Objects attributed to the motor vehicle Renault 'Scenic' (matricula 59-DA-27)

286C/2007-CRL1 D Nail ([human] hand)
From this fragment of a nail from the finger of a [human] hand, a DNA result was obtained through the LCN technique which corresponded to Gerald McCann. In the same result an additional DNA component, unique and unconfirmed, was found that left no room for any other interpretation.

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286C/2007-CRL2E Nail (hand)
From this fragment ... a DNA result was obtained through the LCN technique which corresponded to Kate Healy. In the same DNA result were found two more DNA components, one of which was not confirmed; these DNA components left no room for any other interpretation.

286C/2007-CRL10 Baggage compartment
This object comprised two sections of the baggage compartment of the Renault Scenic, the first being a baggage compartment lined with fabric with ventilation holes (designated in the UK laboratory as CRL/10(1)) and, the second a moulded plastic extension (designated in the laboratory as CRL/10(2)).

A mixed, low-level DNA result, appearing to be from at least three people, was obtained from the cellular material collected (harvested) from the baggage compartment lined with fabric (286C/2007-CRL/10(1)) of the motor vehicle. That sample was submitted to tests to obtain DNA profiles through the LCN technique.

A DNA result through the LCN technique, which appeared to be from at least three persons, was obtained from the cellular material collected (harvested) from the baggage compartment lined with fabric (286C/2007-CRL/10(1)). In my opinion, this result is too complex to make a

meaningful interpretation.

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The attempt to obtain a DNA profile from any cellular material collected from the plastic area on the baggage compartment (286C/2007-CRL /10(2)) was unfruitful [fruitless, in vain, useless, unproductive, unsuccessful], because no DNA profile was obtained.

A mixed, low-level DNA result, that appeared to be from at least two persons, was obtained from a second area of the baggage compartment plastic (286C/2007-CRL /10(2)). This sample was submitted for tests to obtain DNA profiles through LCN.

A DNA result by complex LCN that appeared to be from at least three persons, was obtained from cellular material collected on the section of the baggage compartment 286C 2007 CRL10 (2) area 2. In my opinion, that result is too complex for a meaningful interpretation.

An incomplete, low-level DNA profile that matched corresponding components in the profile of Gerald McCann was obtained from cellular material present on the card key - (286C/2007-CRL (12)). **I guess this is the fob of the car-keys**

My colleague, Andrew Palmer, submitted various hair collected from the Renault Scenic for tests, using ... LCN.

Those hairs were designated as 7B hair 1 and 7C hairs 7, 13 e 15. Attempts to obtain a DNA profile of each hair by LCN was unfruitful, because no DNA profile was obtained by LCN, possibly due to there being an insufficient quantity of good quality DNA.

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Objects attributed to the Apartment 5A of the Ocean Club

286/2007-CRL (1) Pieces of floor-tile identified as number 1

A DNA result by LCN, that appeared to be from at least three persons and that was too complex for a meaningful interpretation, was obtained from the cellular material collected from these floor tiles.

286/2007-CRL (2) Pieces of floor-tile identified as number 2

An inconclusive, incomplete DNA result, consisting of only some unconfirmed DNA components, was obtained from the cellular material recovered from the edges of floor-tile 2 from the apartment floor. The attempt to obtain a DNA profile from any cellular material recovered from the larger area of floor-tile 2 was unfruitful, given that it was not possible to obtain any DNA profile. These samples were then subjected to LCN analysis.

An incomplete, low-level DNA result was obtained through LCN from cellular material in an area of floor-tile 2. In my opinion, there is not any positive proof that supports the theory of any of the members of the McCann family to have contributed DNA to this result. A DNA result was obtained through LCN consistent with only one DNA component from a second area of floor-tile 2. In my opinion, this component leaves no room for any other interpretation.

286/2007-CRL (3) Pieces of floor-tile identified as number 3

The attempts to a DNA profile from any cellular material in two areas of this floor-tile were unfruitful, given that no DNA profile was obtained. These samples were submitted for LCN

analysis.

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A DNA result that consisted of only some DNA components was obtained through LCN analysis of cellular material recovered from one area of floor-tile 3. In my opinion, this result left no room for any other interpretation. The attempt made to obtain a DNA profile through LCN from a second area of floor-tile 3 was unfruitful, given that no profile was obtained.

286/2007-CRL (4) Pieces of floor-tile identified as number 4
Low-level DNA results were obtained through LCN from cellular material present in swabs collected from these floor-tiles. In my opinion, this result contained information too meagre [scanty/poor] to permit a meaningful comparison.

286/2007-CRL (5) Pieces of floor-tile identified close to number 1
The attempt to obtain a DNA result through the LCN technique from some cellular material present in swabs collected from the marks [spots] 1, 2 and 3 were unfruitful, given that no DNA profile was obtained.

286/2007-CRL (6) Pieces of skirting board identified as number 1
A DNA result that appeared to be from at least three persons and that was too complex to permit a meaningful interpretation was obtained through LCN from these objects.

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286/2007-CRL (7) Pieces of skirting board identified as number 2
A DNA result that appeared to be from at least three persons and that was too complex to permit a meaningful interpretation was obtained through LCN from cellular material recovered from these objects.

286/2007-CRL (8) Pieces of skirting board identified as numbers 2 and 3
A DNA result that appeared to be from at least three persons and that was too complex to permit a meaningful interpretation was obtained through LCN from cellular material recovered from these objects.

286/2007-CRL (9) Pieces of skirting board identified as number 3
A DNA result that contained information too meagre to permit a meaningful interpretation was obtained through LCN from cellular material present in swabs collected from these objects.

286/2007-CRL (10) Pieces of skirting board identified as number 4
A DNA result that appeared to be from at least three persons and that was too complex to permit a meaningful interpretation was obtained through LCN from cellular material recovered from these objects.

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286/2007-CRL (11) Pieces of skirting board identified close to number 1
A DNA result that appeared to be from at least three persons and that was too complex to permit a meaningful interpretation was obtained through LCN from cellular material recovered from these objects.

286/2007-CRL (12) Pieces of skirting board identified close to number 4
Low-level DNA results were obtained through LCN from cellular material present in swabs collected from these objects. In my opinion, there exists no proof that supports the theory that any member of the McCann family had contributed DNA to these results.

286/2007-CRL (13) Residual/small fragments in the area of the skirting board.
The attempt to obtain a result through LCN from any cellular material that may have been in these fragments was unfruitful, given that no profile was obtained, possibly due to the absence of sufficient good quality DNA.

286/2007-CRL (14) Dust/small fragments in the area of the floor tiles
This object was not adequate to perform DNA profile tests.

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286/2007-CRL (15) Cement-glue [grouting] between the floor tiles
The attempt to obtain a result through LCN from any cellular material that may have been in these fragments was unfruitful, given that no profile was obtained, possibly due to the absence of sufficient good quality DNA.

286/2007-CRL (16) Cement-glue [grouting] between the floor tiles identified as number 1
A DNA profile that did not match any [of the five members] of the McCann family was obtained through LCN from cellular material recovered in that area.

286/2007-CRL (17) Cement-glue [grouting] between the floor tiles identified as number 2
A DNA profile that appeared to be from at least two sources was obtained through LCN from cellular material recovered in that area. In my opinion, the major part of the profile matched that of Lino Henriques. Breaking [departing] from the principle, for it to have had a DNA contribution from Lino Henriques then the remaining information in the smaller part of the result is too meagre to permit a meaningful interpretation.

286/2007-CRL (18) Cement-glue [grouting] between the floor tiles identified as number 3
The attempt to obtain a result through LCN from any cellular material that may have been in these fragments was unfruitful, given that no profile was obtained, possibly due to the absence of sufficient good quality DNA.

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286/2007-CRL (19) Cement-glue [grouting] between the floor tiles identified as number 4
The attempt to obtain a result through LCN from any cellular material that may have been in these fragments was unfruitful, given that no profile was obtained, possibly due to the absence of sufficient good quality DNA.

286/2007-CRL (20) Fragments of floor tile and grouting
The attempt to obtain a result through LCN from any cellular material that may have been in these fragments was unfruitful, given that no profile was obtained, possibly due to the absence of sufficient good quality DNA.

286/2007-CRL (21) Fragments of bush/shrubbery
Insofar as it relates to this sample, the examination performed was aimed at the detection of the possible presence of blood, no trace thereof having been found. Particles from the

superficial surface layer were recovered and preserved in a way similar to that of hairs and fibres. In my opinion, the capillary roots were not good quality as they were not adequate to perform DNA profile tests.

286/2007-CRL (22, 23 e 24) Oral swabs for elimination

A new deposition to report the examination of these objects will be presented at a future time along with the DNA profiles obtained to date from all the DNA results relating to this case.

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286A/2007-CRL 1A & B Swabs collected from the floor of the apartment

An incomplete DNA result, apparently originating from a male individual but not matching any other profile obtained in this case, was obtained through LCN from the cellular material present in the combined swabs.

286A/2007-CRL 2A & B Swabs collected from the floor of the apartment

A mixed DNA result, apparently originating from at least two people, was obtained through LCN from the cellular material present in the combined swabs. In my opinion, there are no indications that justify [confirm/prove] the theory that any member of the McCann family had contributed DNA to this result.

286A/2007-CRL 3A& B Swabs collected from the floor of the apartment

An incomplete and weak DNA result comprising only some unconfirmed DNA components was obtained from the cellular material present in the dry swab (3A). The attempt to obtain a result from any cellular material that may have been in the same area and present in the wet swab (3B) was unfruitful, given that no profile was obtained. These samples were submitted for LCN tests.

An incomplete DNA result was obtained through LCN from cellular material present in the swab (286A/2007 CRL 3A). The low-level DNA result showed very meagre information indicating more than one person. Departing from the principle that all confirmed DNA components within the scope of this result originated from a single source, then these pointed to corresponding components in the profile of Madeleine McCann; however, if the DNA within the scope of this result originated from more than one person then the result could be explained as being DNA originating from [a mixture of DNA from both] Kate Healy and Gerald McCann, for example. DNA profiles established through LCN are extremely sensitive; it is not possible to attribute this DNA profile to a particular body fluid. nor to determine how or when that DNA was transferred to that area.

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A low-level DNA result was obtained through LCN from the cellular material present in the swab (286A/2007 CRL 3B). In my opinion, there are no indications that justify [confirm/prove] the theory that any member of the McCann family had contributed DNA to this result.

286A/2007-CRL 4A & B Swabs collected from the wall of the apartment

An incomplete DNA result, apparently originating from a female individual, was obtained through LCN from the cellular material present in the combined swabs. In my opinion, there are no indications that justify [confirm/prove] the theory that any member of the McCann family had contributed DNA to this result.

286A/2007-CRL 5A & B Swabs collected from the wall of the apartment

A mixed DNA result, apparently originating from at least two persons, was obtained through

LCN from the cellular material present in the combined swabs. In my opinion, there are no indications that justify [confirm/prove] the theory that any member of the McCann family had contributed DNA to this result. In my opinion, Fernando Viegas could have contributed DNA to this result.

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286A/2007-CRL 6A & B Swabs collected from the wall of the apartment
The DNA results obtained through LCN from cellular material present in these combined swabs contained information too meagre to permit a meaningful comparison.

286A/2007-CRL 7A & B Swabs collected from the wall of the apartment
A mixed DNA result, apparently originating from at least two persons, was obtained through LCN from the cellular material present in the combined swabs. In my opinion, there are no indications that justify [confirm/prove] the theory that any member of the McCann family had contributed DNA to this result.

286A/2007-CRL 8A & B Swabs collected from the wall of the apartment
The DNA results obtained through LCN from cellular material present in these combined swabs contained information too meagre to permit a meaningful comparison.

286A/2007-CRL 9A & B Swabs collected from the wall of the apartment
An incomplete DNA result, apparently originating from a male individual, was obtained through LCN from the cellular material present in the combined swabs. In my opinion, there are no indications that justify [confirm/prove] the theory that any member of the McCann family had contributed DNA to this result. Also, this result did not match in any way the profile obtained from swabs 286A/2007 CRL 1A & B.

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286A/2007-CRL 10A & B Swabs collected from the wall of the apartment
A mixed DNA result, apparently originating from at least two persons, was obtained through LCN from the cellular material present in the combined swabs. In my opinion, there are no indications that justify [confirm/prove] the theory that any member of the McCann family had contributed DNA to this result.

286A/2007-CRL 11A & B Swabs collected from the wall of the apartment
The attempt to obtain a DNA result through LCN from all and any cellular material recovered from these combined swabs was unfruitful, given that no profile was obtained, possibly due to the absence of sufficient good quality DNA.

286A/2007-CRL 12A & B Swabs collected from the wall of the apartment
A mixed DNA result, apparently originating from at least two persons, was obtained through LCN from the cellular material present in the combined swabs. In my opinion, there is no evidence that supports the theory that any member of the McCann family had contributed DNA to this result.

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286A/2007-CRL 13A & B Swabs collected from the wall of the apartment
The attempt to obtain a DNA result through LCN from all and any cellular material recovered from these combined swabs was unfruitful, given that no profile was obtained, possibly due to the absence of sufficient good quality DNA.

286A/2007-CRL 14A & B Swabs collected from the rear of the sofa

Weak and incomplete DNA results consisting only of some unconfirmed DNA components were obtained from the cellular material present in these wet and dry swabs. In my opinion the results are not adequate for comparison purposes. These samples were submitted for LCN analysis.

A mixed, low-level DNA result was obtained through LCN from the cellular material present in each of the swabs. In my opinion, there are no conclusive indications that justify [confirm/prove] the theory that any member of the McCann family had contributed DNA to these results.

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286A/2007-CRL 15A & B Swabs collected from the rear of the sofa

A weak and incomplete DNA result showing indications as having come from more than one person was obtained from the cellular material present in dry swab (15A) effected on the rear of the sofa. In my opinion the result is not adequate for comparison purposes. These samples were submitted for LCN analysis.

A DNA result, apparently originating from at least three persons of whom at least two were male and contributed the majority of the DNA, was obtained from the cellular material present in the wet swab (15B) effected on the rear of the sofa. In my opinion, there are no conclusive indications that justify the theory that any member of the McCann family had contributed DNA to this result.

An incomplete, low-level DNA result, comprising only some DNA components, was obtained through LCN from the cellular material present in the dry swab (15A). In my opinion, there are no conclusive indications that justify the theory that any member of the McCann family had contributed DNA to this result.

The wet swab (15B) was not submitted for further LCN analysis.

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286A/2007-CRL 16 & 16B Two blue curtains and one white curtain

286B/2007-CRL 1 One white section of a curtain

These curtains were analysed for traces of blood, semen and saliva, none of which were detected. The hem of one of the blue curtains (16) was swabbed to collect any cellular material that might exist. An incomplete, inconclusive DNA result consisting only of two unconfirmed DNA components was obtained. In my opinion the result is not adequate for comparison purposes. The sample was submitted for LCN analysis.

An incomplete, low-level DNA result, comprising only some DNA components, was obtained through LCN from the cellular material recovered from the hem of one the curtains. In my opinion, this result contained information too meagre to permit a meaningful interpretation.

Object attributed to Leicestershire Police

HQ MJN/994 Cloth / piece of cotton wool

The object consisted a plastic bag containing a piece of cloth around cotton wool which showed orange and brown spots. No blood was detected.

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Object sent to Mr & Mrs McCann, Rothley, Leicester

EMJ/53 Envelope

The envelope flap was swabbed to recover any cellular material that might exist. An incomplete, low-level DNA result was obtained through LCN which, in my opinion, was too complex to permit meaningful interpretation.

The attempt to obtain a DNA result through LCN from all and any cellular material that might have existed on the gum of the envelope was unfruitful, given that no DNA profile was obtained.

Conclusion

In my opinion, the laboratory results that were attained did not help to clarify whether or not the DNA results obtained within the scope of this case were from Madeleine McCann.

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Basic information on the establishment of DNA profiles.

DNA is a complex chemical that is found in the majority of cells in the human body, including cells in the blood, semen, saliva and hair roots. DNA carries genetic information that determines physical characteristics of a person and directs the processes involved in the functioning of an organism. This information exists in the form of a code, half of which is inherited from the father and [half] from the mother.

Except for truly identical twins, the DNA of each person is unique, although the technology currently available today does not permit the analysis of all the differences between persons. The techniques used by FSS analyses specific regions of DNA known as short tandem repeats (STRs), that are known to be amply variable from individual to individual. The techniques of establishing DNA profiles can, therefore, be used to exclude, conclusively, one person as the donor of an unknown DNA source, and can, frequently, provide convincing indications in terms of participation [contribution -], though not allowing, as yet, proof of identity.

The establishment of DNA profiles (STR) uses the technique of DNA amplification, through which specific DNA regions are selected and copied many times. This increases the quantity of DNA available for analysis and means that a DNA profile can be obtained from samples in which the initial quantity or quality of DNA is not adequate for other methods of establishing profiles.

In this way, DNA profiles are produced through amplification (copying) of eleven different areas of DNA. Ten of those areas contain STR. They are known as D3, VWA, D16, D2, D8, D21, D18, D19, THO1 and FGA. The eleventh, known as amelogenina, indicates the sex of the donor. The individual components of a DNA profile are represented by a series of peaks that can be measured, allowing them to be attributed a designation [labelled -]. One person will have two peaks in each STR, one inherited from each progenitor [parent], unless the same STR has been inherited from both progenitors, in which case only one peak will be observed.

If the DNA profiles relating to a stain, obtained from a crime [scene], and [that of] a suspect reveal no differences, it is said that they match. The estimation of the amount of the level of proof of DNA profiles that match between, for example, a stain of body fluid and a suspect, consists of calculating the probability of obtaining the match if, in reality, the stain was not from the suspect, but was from another individual with the same DNA profile. That is known as the probability of correspondence [matching].

The probability of matching depends upon the level of kinship [parental similarity] existing between the suspect and another individual. True identical twins have the same profile. But, due to the random manner in which DNA from the two progenitors combine to form the descendant, the probability of two siblings presenting a match in all ten STR regions is, approximately, one in ten thousand (1 in 10,000). The more distant the relationship becomes between two persons, the more reduced becomes the probability of matching in all ten STR regions.

For example, the probability of two first cousins having the same profile is of the order of one to one hundred million (1 to 100-million).

Where there exists no clear indication that a relative close to the suspect is involved, it is common practice to indicate a probability of matching relative to an unknown person who has no kinship with the suspect. With a complete profile this probability of matching is of the order of one to one thousand million (1 to 1,000-million) [or 1 to 1-billion using U.S. numbering].

In the case of a partial profile being obtained, the probability of matching is calculated using reference databases [tables] that contain calculated proportions of each DNA profile component present in the general population. These estimates are then combined in a manner that permits compensation for possible associations between DNA components in order to establish the calculation of the probability of matching relating to the partial DNA profile.

The calculations of probability of matching are done using three databases containing DNA profiles obtained previously from individuals of caucasian, afro-caribbean and asiatic descent **of this country** [namely, U.K.] When the racial origin of a person who left the biological material is not known, the result presented in the deposition will be the lowest of the results obtained.

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Summary

Total samples/tests in report	64	
Sample incomplete	16 times	
DNA attempt "unfruitful"	15 times	
No support for "theory"	13 times	
Sample mixed	10 times	
Sample too complex	9 times	
Sample low-level	9 times	
Sample too meagre	7 times	
Named matches	6 times	3xfamily; 2xpolice; 1xMBM
Not tested	3 times	WHY not?
Inadequate for testing	2 times	
Unmatched profile	1 time	Why not followed up?



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Notes:

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Notes:

"Cabelos" is used only for hair from the head; "Pelos" is used for all other body hair.

3. Sometimes verb tenses swung from past to present and back again within a paragraph, and to the future in one case. As far as possible, I tried to be faithful to the verb tenses as written.

=====

Witness deposition: Andrew Lloyd Palmer; Age: Older than 18 years

Profession: Forensic scientist

Address: FSS

References: FSS: 300655190, 400972691; Client: Operation TASK CJS/URN: 07/06085



I declare that:

This deposition (comprising five pages signed by me) is the truth, to the best of my knowledge, and that I give it knowing that, if it should be presented as evidence, I would be subject to legal penalty should I have declared anything that I know to be false or that I think is not true;

I declare also that,

I am expert in the field of forensic sciences and that I was asked to give a deposition. I confirm that I have read the guidelines contained in the document Disclosure: Expert's evidence and unused material, that specifies my functions and documents my responsibilities, with respect to disclosure as an expert witness.

I have followed directions [guidance -] and understand the ongoing nature of my responsibilities in respect of disclosure. In accordance with my duties of disclosure, as documented in the booklet of directions [standards and procedures manual -], I:

- a. confirm that I have performed my duties to record, conserve and disclose material, in accordance with the Law relating to Investigations and Penal Process of 1996, as amended;
- b. have compiled an index of all the material. I assure that such index will be updated should further material be delivered to me or should I, myself, produce any [further material];
- c. understand that, should I come to alter my understanding relating to any conclusion, I am bound to communicate that as soon as possible to the head of the investigation, presenting him with my reasons [for such a change].

[TRANSLATOR'S NOTE: While the above is a reasonable translation of the Portuguese provided in the document, it must not be taken to be a wholly accurate statement of the legal 'oath' actually signed by A.L.Palmer.]

Signed 9 November 2007

Qualifications and experience

I am a qualified *Chartered Biologist* [Footnote 6 states: The highest professional level

achievable] and a member of the Biological Institute. I have 25 years experience as a forensic scientist. During this period I have examined hundreds of objects in the detection of blood, semen, saliva, fibres, hair, down and other trace material derived from [human] contact. I have been present at many crime scenes, having given technical opinions in various cases involving the detection of blood and the interpretation of samples of blood spots/specks. I have drafted reports and have given depositions in numerous cases of homicide, sexual violence and other cases involving the transfer of body fluids and the interpretation of the results of DNA profiles. I am a forensic - doctor/practitioner - , registered with the Order [*presumably of Forensic Medicine*], specialising in DNA analysis, body fluids, capillary distribution [system of blood flow around the human body], down, hair and fibres.

Laboratory reference

The lab reference of this case is 300655190

Objects received

According to the lab records of 7 August and 6 September 2007 the objects referred to in this report entered the FSS laboratory in Birmingham, having been remitted by the Police Science Laboratory of Portugal and by the Leicestershire (UK) Police, respectively.

Objective

The objective of my examination was to determine if down or hair was recovered from the Renault Scenic 59-DA-27 and, if affirmative, to determine if those may have come from Madeleine McCann.

Mobilisation of scientific support people

The examination of the objects in this case was done with the assistance of scientific support people. A list of those people, together with a brief description of the work that each performed, is in the Forensic Examination Record/Register, which I present as exhibit ALP/1. It is a complete record of all work done, together with notes made during the examination. These notes are available in the lab for verification, if necessary.

Examination and results

Reference objects

I received [obtained] information from the pillow-case SJM/1, the *tops* SJM2, 4 and 5, and the hairbrush SJM/36 belonging to Madeleine McCann or used by her. The hair found on these objects was used in substitution of [in place of] reference samples of her hair, [which were] not considered to be authentic samples of her hair.

No hair was recovered from the pillow-case SJM/1 nor the hairbrush SJM/36.

A total number of twelve [12] hairs or hair fragments were recovered from the *tops* SJM/2, SJM/4 and SJM/5. All of these appeared to be hair and not down, being mainly blonde in colour. One of the hairs was brown and distinctly darker than the other hairs, suggesting, at the least, that this was a hair from someone else.

The remaining eleven hairs/fragments varied in length from 4 millimetres to 45 millimetres [$\sim 1/8$ " to $\sim 1,3/4$ "]. I could not conclude that all hairs were from the same person. If they had been from Madeleine McCann, then they are not representative/typical/characteristic of a sample of her hair, given the length of that seen in photographs of her.

Objects from the Renault Scenic - licence plate 59-DA-27

The following objects recovered from the scenic were subjected to examination:

1A, 1B, 1C, 1D,
2A, 2B, 2C, 2D, 2E,
3,
4A, 4B, 4C,
5A, 5B, 5C,
6A, 6B, 6C,

7A, 7B, 7C,
8A, 8B, 8C,
9 and
11 (2 objects).

There were more than two hundred hairs, down or fragments of hair and down. The majority appeared to be different from the blonde reference hairs recovered from SJM2, 4 and 5. Furthermore, no blonde hair consistent with that seen in photographs of Madeleine McCann was found.

Approximately 15 hairs, down or fragments were blonde and fair, presenting a similarity with the reference material. All were of insufficient length to make a solid [definitive] comparison. Furthermore, they are too short to do mitochondrial DNA tests. Folicle root material is insufficient for standard DNA tests.

Four hairs - one from 7B and three from 7C - were sent for *Low Copy Number* DNA testing. The results of those tests will be presented by my colleague John Lowe.

Conclusion

In the objects recovered from the Scenic, there were around 15 blonde/fair hairs similar to the reference hairs from SJM2, 4 and 5. However, as it was not possible to do solid [definitive] or significant [forensically meaningful] tests it is not possible for me to determine if, or not, these could have been from Madeleine McCann.

The conclusions expressed in the present deposition are based on information available at the date of the examination. In the case that there are changes to that information, or additional information becomes available, it may be necessary to reconsider my interpretation and conclusions. That re-evaluation will be most effective when done immediately prior to any judgement.

A.L. Palmer

Translated by Lieve Van Loock.

===== END OF DEPOSITION =====

Subsequent action

pages 334-336

PDF ref: 02 - volume II - apenso I

TRANSLATION

Report of Examinations referred to in a Case Study

This is a report about the results obtained within the scope of the disappearance of Madeleine McCann as compiled by
JOHN ROBERT LOWE BSc Cbiol MIBiol RFP.

Forensic Science Service Ltd.,
Birmingham Laboratory, Priory House,
Gooch Street North, Birmingham, B5 6QQ

The report comprises two pages and talks about work performed within the scope of of the case file with the following reference:

Referencias FSS: 300 655 1 90 / 401 020 769
Referencia Cliente: OP TASK

Date: 6 Maio 2008

The true information in this report talks about examinations referring to a case study done within the scope of the case file noted above. The respective results obtained were recorded and conserved in conformance with the guidance in the pamphlet called *Disclosure: Expert's evidence and unused material*. The true information in this report is not intended to serve as probatory material. Should this report or any of the information contained herein be called for presentation against a defence it is understood that it would be necessary to give a covering deposition under terms of sections 9 and 10 of the Criminal Justice Act 1967.

Dear Detective Superintendent Prior,

This information is exclusive, confidential and constitutes a response to the supplementary request contained in the recent Rogatory Letter from the Portuguese authorities.

FSS-GF-680 Emissao 2, Pagina 1

On 9 April 2008, the DNA profiles obtained from the probatory components [objects] 286A/2007/CRL1A&B, 4A&B, 9A&B e 16A&B were submitted with a request to the National DNA Database(R).

Various matches were obtained with the results of 286A/2007/CRL4A&B; the majority of them were eliminated based on additional information obtained from the result; however, two remain (namely, bar codes 90264515 & 90374723). Those profiles were obtained using the old SGM system which examined only six areas of DNA. For this reason the samples should be upgraded [re-tested] using the new standard system SGMplus. It is likely that those samples would be eliminated after the upgrade.

Various matches were obtained with the results of 286A/2007/CRL9A&B; the majority of them were eliminated based on additional information obtained from the result; however, one remains (namely, bar code 80004801). It has matched with a sample of a spot recovered from a crime and cannot, at this time, be associated with a specific individual. Nevertheless, as that sample was processed with the old SGM system I consider the match to be of negligible significance.

All matches obtained from other samples were eliminated.

If you wish for more support with this material, don't hesitate to contact me.

Yours faithfully

[Signature] John Lowe

Translation performed by Lieve Van Loock:

[122 Questions for FSS \(English\) 2007.12.12](#)

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cr2_122



From Rogatory Letter sent to the UK

Questions for FSS

P 122

XVIII To request the original copies of the examinations made by the FSS, as well as the proceedings that led to the conclusions obtained, along with the answers to the queries on the Official Letter (enclosed - document A) requesting forensic examinations, which in the meantime, has already been sent by email to the FSS.

XIX Complementary request in the scope of the abovementioned official letter, to compare all the profiles obtained in the tests already carried out, with those in the British national database.

XX To request the comparison of all the obtained profiles with Madeleine McCann - s reliable reference samples (demonstrated to belong to her).

5 to 7 FSS examination report from John Lowe 2008.05.22 (Portuguese)

08-Cartas Rogatorias Vol 8 Pages 5 - 7

cr8_5



cr8_6



cr8_7



Carta Rogatoria-Home OfficeIV.pdf

FSS - Forensic Science Service Ltd
REPORT OF EXAMINATION

This is the report of the results for the disappearance of Madeleine compiled by John McCann BSc ROBERT LOWE Cbiol MIBiol RFP

Forensic Science Service Ltd
Birmingham Laboratory, Priory House, Gooch Street North, Birmingham, B5 6QQ
Tel 0121 607 6973
e-mail: john

This report consists of three pages and relates the work carried out in the following case;

Reference:

Reference FSS: 300 655 190 / 401 020 769

Reference Customer: Task Operational

Date: May 22, 2008

The information provided in this report is the result of examination work done in the case referenced above.

The findings and results of the examination were recorded and retained in accordance with the manual described as 'Disclosure' (Revelation): Evidence of experts and material not used. The information contained in this report is not intended to be used as evidence, and it is agreed that if this report or any information contained therein will be used as defence evidence it will be necessary for me to provide a statement under s9 or s10 CJA 1967

Dear Sir

The purpose of this report is to summarize the results of several information searches conducted using the National DNA Database and the use of a control database.

The LCN DNA profile previously obtained from the following submitted data were subjected to a single search of the National DNA Database.

- 286A/2007/CRL1A & B
- 286A/2007/CRL4A & B
- 286A/2007/CRL9A & B
- 286A72007/CRL16A & B

Numerous similarities were returned by the National DNA Database for the DNA profile

obtained from 286A/2007/CRL4A & B; however, I used additional information within the results that was not included in the search parameters to eliminate all except two of these similarities. The two similarities that remained were recorded with the bar code 90264515 & 90374723. These are samples of DNA profiles obtained using the old system of SGM which examines six areas of DNA. The new system SGM plus examines these six areas plus four other areas. If these two profiles were updated, in my opinion they would also be eliminated as possible donors of DNA, given the result obtained from 286A/2007/CRL4A & B.

Numerous similarities were sent [returned] by the National DNA Database for the DNA obtained from 286A/2007/CRL9A & B, however, I used additional information in results that was not included in the search parameters to eliminate those similarities.

Numerous similarities were sent [*returned*] by the National DNA Database for the DNA profile obtained from 286A/2007/CRL16A & B, however, I used additional information in the results that was not included in the search parameters to eliminate those similarities.

For information only, a database of voluntary samples was constructed for the purpose of control information. In accordance with available records, the database comprised samples from 286 volunteers, four of which were rejected. The DNA profiles from volunteers were compared with the following samples:

286A/2007/CRL1A & B
286A/2007/CRL4A & B
286A/2007/CRL9A & B
286A/72007/CRL16A & B

The voluntary samples were also compared with 'crime stain 1', a DNA profile obtained by Portuguese scientists using their DNA profile system. The profile was recovered from suspected semen on a blanket in the apartment 5.

From the available records, I conclude that 281 voluntary samples were eliminated as contributors of DNA to the list of search profiles above, since its profile does not match the profile sought; consequently, the DNA can not have originated from them.

I conclude further that, the DNA profiles obtained from the 'crime stain 1' and 286A/2007/CRL9A & B coincide with Charlie Gordon (bar code 51156964). I believe that Charlie Gordon was born on 29 January 2005, and if this is the case, in my opinion, the DNA profile obtained in 'crime stain 1' is not the result of semen found on the blanket.

If more information is needed in this matter, please do not hesitate to contact me.

Sincerely,

John Lowe

Source: http://www.mccannpjfiles.co.uk/PJ/JOHN_LOWE.htm