

Massachusetts State police Crime Lab Chemist Mary Kate McGilvray (MKM) conducted the serology testing on only 21 of the 59 items that tested positive for the presence of blood on them.

MKM switched her results from her lab notes to the Serology Report she submitted on at least one sample, possibly more.

When serology samples are examined and when there are different intensities in the antigens, (That range from 1+ to 4+), MKM considers it a mixture from more than one possible contributor. When the antigens are the same intensity MKM considers the sample from only one contributor.

In MKM's lab notes she finds different antigen intensities for the "A" antigen (3+) and the "B" antigen (4+) in item 44-1 and marks the type as (A,B), meaning a mixture of "A" blood with "B" blood profiles.

But, in MKM's official Serology Report she identifies item 44-1 as having (AB) blood type. The significance with the switching of the results is that Janet Downing had (AB) blood type. One would look at the results simply as coming from Janet Downing. But, if MKM reported the results correctly, the sample could have been contributed by a mixture of Paul Downing Sr., Paul Downing Jr., Ryan Downing, Artie Ortiz and/or someone else.

Eddie's attorney did not have MKM's lab notes at trial. Several years after this case, McGilvray was fired from the Director's position at the State Police Crime Lab.

SPECIMEN	HUMAN	Bleed	A	B	O	A	B	H	Type
1 KA		M	-	3+	-	3+	-	3+	A
2 KB		M	3+	-	-	-	4+	1+	B
3 KAB						4+	4+	-	AB
4 KO		M	4+	4+	-	-	-	4+	O
15 CAS-156-4		LT	-	-	-	-	2+	4+	(B,H)
26 CAS-156-4 CONT		LT	-	-	-	-	-	1+	(H)
37 CAS-156-8						-	3+	3+	(B,H)
48 CAS-156-10-2						-	2+	3+	(B,H)
59 CAS-156-15-1						-	3+	1+	(B,H)
610 CAS-156-15-2 B						-	-	CL	mc
711 CAS-156-15-4 B						-	-	4+	(H)
812 CAS-156-15 CONT						-	-	PCL	mc
13 KA						3+	-	2+	(A)
14 KB						-	4+	1+	(B)
15 KAB						3+	3+	-	(AB)
16 KO						-	-	4+	(O)
917 CAS-156-16-1-A						-	3+	4+	(A,H)
1018 CAS-156-16-2						-	4+	4+	(B,H)
1119 CAS-156-16 CONT						-	-	-	nbqs
1220 CAS-156-19		LT	-	-	-	-	-	-	mc
1321 CAS-156-19 CONT		LT	-	-	-	-	-	CL	mc
1422 CAS-156-20		LT	-	-	-	-	3+	-	(B)
1523 CAS-156-20 CONT		LT	-	-	-	-	-	-	nbqs
1624 CAS-156 CR		M	4+	-	-	-	4+	1+	B
25 KA						4+	-	2+	(A)
26 KB						-	4+	1+	(B)
27 KAB						4+	4+	-	(AB)
28 KO						-	-	4+	(O)
1729 CAS-156-JS		M	4+	2+	-	-	-	4+	O
1830 CAS-704-2		LT	-	-	-	CL	CL	CL	-
1931 CAS-704-2 CONT		LT	-	-	-	CL	CL	CL	-
2032 CAS-704-3-1						CL	CL	CL	-
2133 CAS-704-3 CONT						CL	CL	CL	-
2234 CAS-704-25		H	-	-	-	4+	4+	4+	AB
2335 CAS-704-25 CONT		LT	-	-	-	-	-	-	nbqs
2436 CAS-704-44-1						3+	4+	-	(A,B)

DATE: 1/3/96
CHEMIST: MKM

orig w/ CAS-704

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WILLIAM F. WELD
GOVERNOR

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SECRETARY

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SUPERINTENDENT

The Commonwealth of Massachusetts Department of State Police

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August 7, 1997

LAB. NO. : C95-704 SOMERVILLE (CPAC)
(Supplemental Report)

SEROLOGY REPORT #3

Examination of Material in Connection with a Fatal
Stabbing at Somerville on July 23, 1995.

Victim: Janet Downing
Suspect: Edward O'Brien

On July 28, 1995, Trooper Joseph Duggan of the Massachusetts State Police Middlesex CPAC Unit delivered the following item to this laboratory in connection with the above subject:
Known blood sample, Paul J. Downing (D.O.B. 9/20/49)

On June 16, 1997, Trooper Joseph Duggan delivered the following items to this laboratory:

Known blood sample, Aristides Ortiz
Known blood sample, Ryan Downing
Known blood sample, Paul Downing

EXAMINATION:

Grouping tests were conducted in the ABO (blood group antigens), Phosphoglucomutase subtyping (PGMsub), Esterase D (EsD), Erythrocyte Acid Phosphatase (EAP), Adenosine Deaminase (ADA), and Adenylate Kinase (AK) systems. The results are summarized in the table below:

SEROLOGY RESULTS: KNOWN SPECIMENS							
Sample Description	ABO	PGMsub	EsD	EAP	ADA	AK	
Janet Downing - victim	AB	1+2+	1	B	1	1	JD
Edward O'Brien - suspect	O	1+2-	1	A	1	1	EO
Paul J. Downing (9/20/49)	A	1+2+	1	B	1	1	PDSr
Aristides Ortiz	B	1+2+	1	BA	1	1	AO
Ryan Downing	A	2+	1	B	1	1	RD
Paul Downing	B	1+	1	B	1	1	PD

SEROLOGY RESULTS: QUESTIONED SPECIMENS							
Sample Description	ABO	PGMsub	EAP	ADA	AK	Poss. single source	Possible contributors
Item 6. right shin (Edward O'Brien)	(AB)	---	---	---	---	JD	AO, PD, RD, PDSr
Item 8. floor b/w bath and front door	NT/Q	1+2-	NT/Q	NT/Q	NT/Q	EO	PD
Item 9. floor b/w bath and front door	NT/Q	1+2-	NT/Q	NT/Q	NT/Q	EO	PD
Item 10. threshold of front door	NT/Q	1+2+	B	1	---	JD, PDSr	PD, RD
Item 11. floor in front of dining room	NT/Q	1+2+	B	1	---	JD, PDSr	PD, RD
Item 12. inside front door	NT/Q	1+2-	A	1	1	EO	
Item 13. front door above inside knob	(ABH)**	NOT FURTHER TESTED BY THIS LAB					JD, PD, RD, AO, PDSr, EO
Item 14. right door jam-dining room	NT/Q	1+2-	A	1	1	EO	
Item 15. 3rd stair (carpet)	NT/Q	1+2+	B	1	1	JD, PDSr	PD, RD

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Item 16. 4th stair (carpet)	NT/Q	1+2+	B	1	1	JD, PDSr	PD, RD
Item 17. 5th stair (carpet)	NT/Q	1+2+	B	1	1	JD, PDSr	PD, RD
Item 19. 5th stair (baseboard)	NT/Q	1+2+	B	1	1	JD, PDSr	PD, RD
Item 20. 4th stair (baseboard)	NT/Q	1+2+	B	1	1	JD, PDSr	PD, RD
Item 22. above 2nd stair	NT/Q	1+2-	A	1	1	EO	
Item 23. dimmer switch - dining room	NT/Q	1+2+	B	1	1	JD, PDSr	PD, RD
Item 24. blood pool - dining room	NT/Q	1+2+	B	1	1	JD, PDSr	PD, RD
Item 25. white and blue shorts	AB	1+2+	B	1	1	JD	PD, RD, PDSr
Item 36. left wall of cellar	NT/Q	1+2+	---	1	1	JD, AO, PDSr	PD, RD
Item 37. behind cellar post	---	1+2+	NT/Q	NT/Q	NT/Q	JD, AO, PDSr	PD, RD
Item 38. pink dress from cellar	(O)	1+2-	A	1	1	EO	
Item 39. Blue blazer from cellar	AB	1+2+	B	1	1	JD	PD, RD, PDSr
Item 40. Green shirt from cellar	---	1+2+	B	1	1	JD, PDSr	PD, RD
Item 42. Cellar door by dead bolt	(AB)	NOT FURTHER TESTED BY THIS LAB				JD	PD, RD, PDSr, AO
Item 44. Picture of grapes (front)	(AB)	---	B	1	1	JD	PD, RD, PDSr
Item 44. Picture of grapes (back)	NT/Q	1+2-	---	---	---	EO	PI

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Item 45. V-neck blouse (right front)	AB	---	---	---	---	JD	PD, RD, PDSr, AO
Item 70. Wooden post by fingerprint	(ABH)	NOT FURTHER TESTED BY THIS LAB				JD	PD, RD, AO, PDSr, EO

KEY: NT/Q = not tested; quantity limited

** indicates mixture

Mary Kate McGilvray
Chemist III
Crime Laboratory

MKM/mkm

Report to: Trooper Rich Mahoney
Middlesex CPAC Unit

Tom Reilly
District Attorney
Middlesex County

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss.

Mary Kate McGilvray, whom I know to be a chemist of the Massachusetts State Police Crime Laboratory, appeared before me and affirmed the attached to be the results made on Lab. No.: C95-704, a Fatal Stabbing at Somerville on July 23, 1995.

Sworn and subscribed to before me this _____ day of _____ 1997.

Notary Public

My commission expires: _____

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