

No information from mixture

Crime laboratory DNA report

Crime lab user fee: \$5,000

Conclusions:

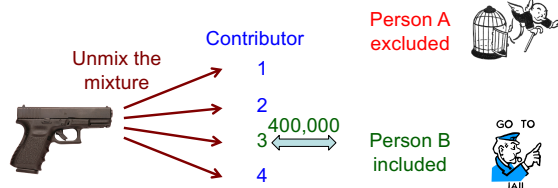
Item 1 – Swab of textured areas from a handgun

The data indicates that DNA from four (4) or more contributors was obtained from the swab of the handgun. Due to the complexity of the data, **no conclusions can be made** regarding persons A and B as possible contributors to this mixture.

Computer reanalysis

Cybergenetics TrueAllele report

Match statistic provides information



Allegheny County: 59 cases, 13 trials, 3 exonerations

Crime	Evidence	Defendant	Outcome	Sentence
rape	clothing	Ralph Skundrich	guilty	75 years
murder	gun, hat	Leland Davis	guilty	23 years
rape	clothing	Akaninyene Akan	guilty	32 years
murder	shotgun shells	James Yeckel, Jr.	guilty plea	25 years
murder	fingernail	Anthony Morgan	guilty	life
weapons	gun	Thomas Dossell	guilty plea	1 year
bank robbery	clothing	Jesse Lumberger	guilty	10 years
drugs	gun	Derek McKissick	guilty plea	2 1/2 years
drugs	gun	Steve Morgan	guilty plea	2 1/2 years
murder	door, clothing	Calvin Kane	guilty plea	20 years
murder	fingernail, clothing	Allen Wade	guilty	life
murder	gun	Jaykwaan Pinckney	guilty plea	10 years
child rape	clothing	Dhaque Jones	guilty plea	6 years
shooting	gun	Anthony Jefferson	guilty plea	4 years
weapons	gun	Zachary Blair	guilty plea	15 years
weapons	gun	Delmingo Williams	guilty plea	3 years
incest rape	clothing	Terry L.	guilty	40 years
bank robbery	hat	Robert Schatzman	guilty	1 1/2 years
weapons	gun	Rashawn Walker	guilty	1.5 years
robbery	hat	Lauren Peak	guilty plea	1 year
rape	body cavity	Freddie Cole	guilty plea	2 years
murder	gun	Chaz White	guilty plea	4 years
sex crime	clothing	Christopher Stavish	guilty plea	2 1/2 years
murder	gun	Jake Knight	guilty	life

Countywide DNA database

Pittsburgh Post-Gazette

Allegheny County crime lab vying to use more advanced DNA database

Technology developed by Cybergenetics gets
conclusive results from DNA mixtures

February 28, 2014

Darryl Pinkins imprisoned

1989 – 5 men raped an Indiana woman
Darryl Pinkins and 2 others misidentified
1991 – wrongfully convicted, 65 year sentence

2001 – DNA mixture evidence
2 contributors found, not the accused
but 5 were needed, post-conviction relief denied

TrueAllele Pinkins findings

1. compared *evidence with evidence*
2. calculated *exclusionary match statistics*
3. revealed 5% *minor mixture contributor*
4. *jointly analyzed* DNA mixture data
5. showed three perpetrators were *brothers*

found 5 unidentified genotypes,
defendants not linked to the crime

Pinkins exonerated



Why crime labs fail on mixtures

- Expertise in forensic biology
 - Great at generating DNA data
- Not in computational statistics
 - Poor at interpreting the data
- Adversarial nature of court
 - Cross-examination, termination
- Strong incentives on lab process
 - Focus on data, not information
- Fear of uncertainty, comfort in certainty
 - Saying nothing avoids controversy

Recommendations

1. Open DNA to public scrutiny
2. Revisit all past DNA mixture cases
3. Educate trial attorneys and judges
4. Fully automate mixture interpretation
5. Extensively validate DNA interpretation
6. Keep methods within their limits
7. Go beyond laboratory limits

Non-governmental organization



JUSTICE
THROUGH
SCIENCE

1. Reanalyze forgotten DNA evidence
2. Educate lawyers, scientists & society

More information

<http://www.cybgen.com/information>



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<http://www.youtube.com/user/TrueAllele>
TrueAllele YouTube channel



Cybergenetics



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