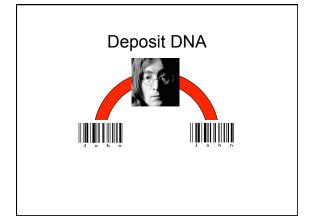
## **DNA Investigation:** Across the Universe

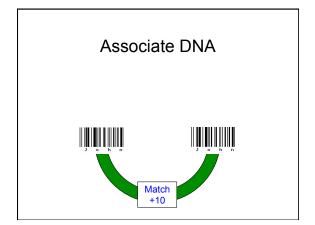
Pennsylvania Homicide Investigators Association April, 2016 State College, PA

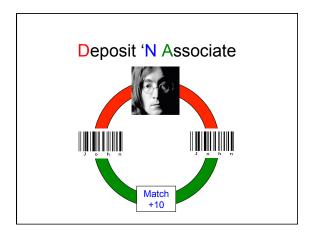
> Mark W Perlin, PhD, MD, PhD Cybergenetics, Pittsburgh, PA

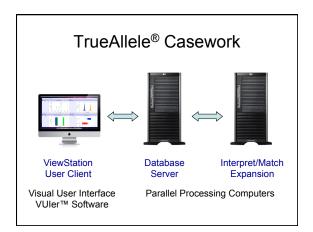


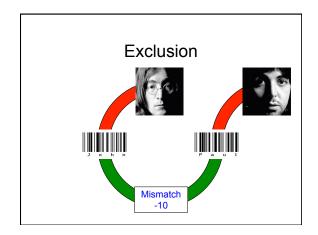
Cybergenetics © 2003-2016

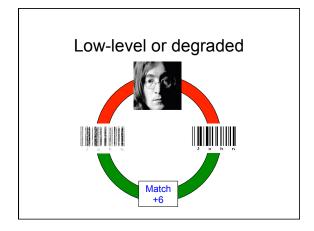


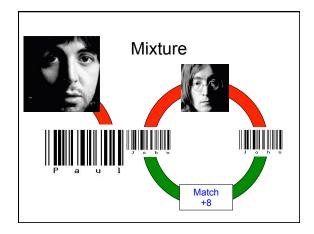












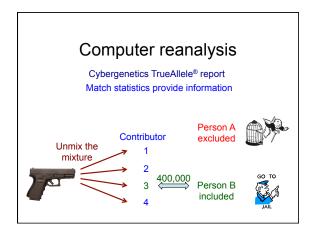
## Inconclusive mixture

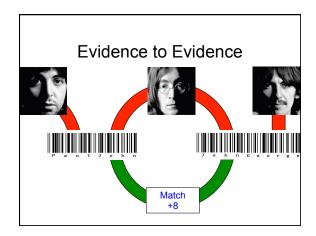
Crime laboratory DNA report Crime lab user fee: \$5,000

## Conclusions:

Item 1 - Swab of textured areas from a handgun

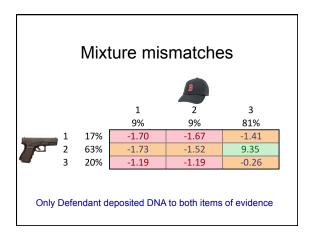
The data indicates that DNA from four (4) or more contributors was obtained from the swab of the handgun. Due to the complexity of the data, no conclusions can be made regarding persons A and B as possible contributors to this mixture.

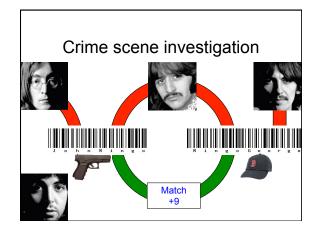


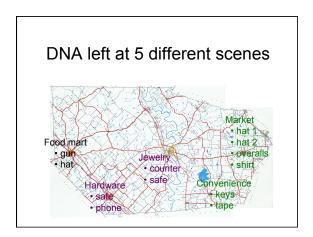


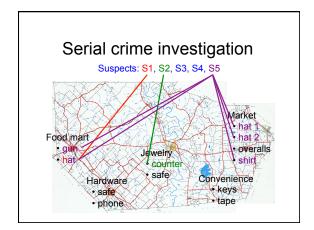


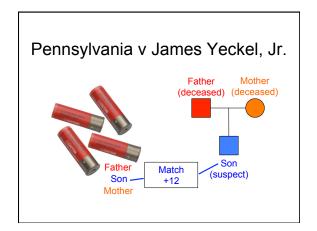












Т	44 cases, 8 trials, 3 DNA exonerations TrueAllele in Allegheny County			
Crime	Evidence	Defendant	Outcome	Sentence
rape	clothing	Ralph Skundrich	guilty	75 years
murder	gun, hat	Leland Davis	guilty	23 years
rape	clothing	Akaninyene Akan	guilty	32 years
murder	shotgun shells	James Yeckel, Jr.	guilty plea	25 years
murder	fingernail	Anthony Morgan	guilty	life
weapons	gun	Thomas Doswell	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	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	Delmingo Williams	guilty plea	3 years
incest rape	clothing	Terry L.	guilty	40 years
bank robbery	hat	Robert Schatzman	guilty	pending
weapons	gun	Rashawn Walker	guilty	1.5 years
robbery	hat	Lauren Peak	guilty plea	1 year

Investigative power				
Capability	Human review	TrueAllele		
Data choice	Selection bias	Use all data		
Uncertainty	Thresholds	Statistics		
Neutral	Include only	Include/Exclude		
Statistic	How many tests	Match information		
Objective	No	Yes		
Validated	No (0)	Yes (30)		
Accurate	No	Yes		
Frye challenge	No	Yes		
Item-to-item	No	Yes		
Touch DNA	No	Yes		
Complex mixtures	2-3, 50%-100%	2-10, 5%-100%		
Database	10%	100%		

