

**9<sup>th</sup> ANNUAL NATIONAL  
PROSECUTORS' CONFERENCE**

**SATURDAY, 24 MAY 2008  
DUBLIN CASTLE CONFERENCE CENTRE**

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***Issues in DNA  
Profiling***

# **ISSUES IN DNA PROFILING**

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# Applications

- **Intelligence**
- **Investigation**
- **Evidence**



# Intelligence Database



- **Crime profiles**



- **Person profiles as defined by legislation**



- **Unidentified bodies**



# Investigation

- **Items profiled in connection with particular case**
- **Suspect(s) profiled**
- **Exclusion / inclusion**
- **Possible links between items and named suspect(s)**



# Evidence

- **File**
- **Book of Evidence**
- **Written / Oral**



# DNA Profile in Context

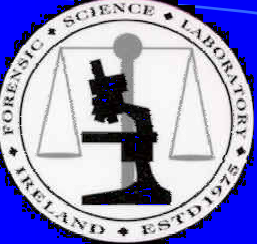
- **Accused denies contact / Silent**
- **Useful**
  
- **Accused legitimate access**
- **CCTV / Witnesses**
- **Consensual sex**
- **Questionable**



# Maximising Resources

- **Prioritisation of cases**
- **Limited information**
- **Essential / Overkill**





# Best Evidence

- **Exhaustive in all areas?**
- **Scene**
- **Repetitive witnesses**
- **CSI Effect**



# Laboratory Input

- **Fit for Purpose**
- **Risk assessment**
- **Unreasonable**
- **Waste of public resources**



# Alternatives to One size fits All

- **Phased reporting**
- **Agreed fields**
- **Second guessing**
- **Interpretation**



# Old / Cold Cases

- **Handling of case items pre-DNA era**
- **May not be compatible with modern techniques**
- **Omagh Bomb**



# 'LCN' Issues

- **Low Copy Number**  
(very little DNA)
- **Technique used**  
(modified standard methods)



# LCN Results

- **Sensitivity level : Often >>> 1 source detected**
- **Variable on re-test**
- **Inherent**



# Variable results

## Standard Situation

- **Guppies and Neons**
- **Plentiful**
- **Both**
- **Represents content of pool**



# Variable results?

## Low Level DNA

- Scarce
- Guppy
- Nothing
- Neon
- Both
- Weed
- Representative?





- **Concerns**
- **Relevance of result**
- **Why bother?**
- **Use as Intelligence**



# Current Endeavours

- **Improve Extraction of DNA**
- **More fish**
- **Representative**



# Response

- **CPS (Crown) suspended use**
- **Report commissioned by Regulator**
- **CPS re-instated before report publication**
- **Clean Bill of Health**



# Forensic Science: Public Service or Private Enterprise

- **England and Wales**
- **2-3 major suppliers**
- **Pros and Cons**



# Pros

- **Focused submissions**
- **Streamlined processes**



# Cons

- **Cost reigns**
- **Inhibits information exchange**  
**Investigation**  
**Colleagues**
- **Contrary to ethos of science**



# Conflict

- **Investigator wants more sensitivity**
- **Push to limit : loses significance**
- **Balance to serve CJ system**