

**Palm Beach County
Sexual Assault Response Team (SART)**

**Sexual Battery Investigations
Recommendations Regarding Forensic Testing**

The primary objectives of the Palm Beach County (PBC) Sexual Assault Response Team (SART) are to improve the treatment of survivors, case outcomes, efficiency and protection of the community by creating a victim centered response.

Members of the SART Forensic Testing Subcommittee include law enforcement officers, forensic scientists, chemists, Sexual Assault Nurse Examiners (SANE), prosecutors, advocates, Child Protection Team (CPT) representatives and sexual assault survivors. The subcommittee's objective is to identify "best practice" recommendations for Palm Beach County agencies regarding contemporary DNA and toxicology issues with the goal of solving crimes and improving prosecutions.

The following recommendations have been developed by the SART Forensic Testing Subcommittee:

A. INTRODUCTION

Forensic evidence collection is often of paramount importance to thorough sex crimes investigations. Proper DNA and toxicology analysis plays a critical role within the entire criminal justice process. Minute traces of blood, saliva, semen, skin cells or other biological material may result in important investigative leads due to recent significant refinements in forensic evidence analysis.

B. EVIDENCE COLLECTION

Biological evidence deteriorates and will only be useful if collected and preserved properly. The timely recovery of biological evidence will aid in the investigation and prosecution of sex crimes.

The most common types of biological evidence that may be left at a crime scene include: blood, semen, saliva, hair and epithelial cells (from sources such as skin, vaginal, oral and tissue).

As technology advances, laboratories are able to analyze smaller samples of biological evidence to identify a DNA profile. Historically, many jurisdictions have used 72 or 96 hours as a "cut-off" when deciding if a sexual assault exam should be completed. Advancing DNA technologies continue to extend the time limits for sexual assault exams and crime scene investigations. As an example, sperm has been recovered from the vagina of a victim as much as 10 days following a sexual assault. As a result, new guidelines are needed for investigators to help determine when a forensic sexual assault

examination, known as a Sexual Assault Kit (SAK), is appropriate.

PBC SART recommends conducting a SAK up to 120 hours following a sexual assault. It is important to note that this time frame is simply a guideline and should not be considered a rigid policy. Every sexual assault should be evaluated on a case by case basis. *The question of whether or not to conduct a forensic examination should be based on the likelihood that probative evidence will be recovered, not a rigid time frame.* Investigators should consider factors such as the type of assault:

- Penile/vaginal
- Sodomy
- Oral copulation
- Digital penetration and attempted sexual assault, and
- Hygiene of the victim and/or suspect, and
- Activity of the victim and/or suspect after the crime, and stranger vs. known assailant, and
- Age of victim

Note the difference between a SAK and other potential crime scene evidence. Possible sources of forensic evidence to consider include: suspect's home, vehicle, school locker or place of employment, items or clothing taken by the suspect or left behind by the victim (especially underwear), items used by the suspect during the crime like a mask, lubricant, foreign objects, photographs, weapons, and drugs/chemicals related to drug facilitated sexual assaults. Like any other crime, officers investigating sex crimes must evaluate the need for a search warrant to identify and collect evidence from the suspect and crime scene.

Another important, but often overlooked, source of evidence is the suspect's body and clothing. Anything that can be transferred from the suspect to the victim can also be transferred from the victim to the suspect. Investigators should consider what forensic evidence can be recovered and what legal authority they have to seize the potential evidence from a suspect (example – swabs of the suspect's penis for the victim's DNA).

Touch evidence is defined as evidence which has no visible staining and would contain DNA that only results from touching an item with the skin. Touch evidence does not include cigarette butts, swabbing from cans, bottles straws or other items in which the substance being tested is most likely saliva. Touch evidence does not include items submitted for identifying the wearer such as shirt, shoes, hats, etc. where there is a probability of prolonged contact. Touch evidence will be accepted for possible DNA analysis when there is a high degree of likelihood that the evidence submitted will provide informative results or investigative leads. A high degree of likelihood may be established by means of witness corroboration, visual monitoring systems, or sound deductive reasoning.

If elimination DNA standards are associated with the evidence, they should be submitted in order for a case to be assigned (i.e. owners or regular occupants of a residence or vehicle). If a suspect(s) has been identified, the standard from the suspect(s) must be submitted in order for the case to be assigned. Exceptions may be granted on a case-by- case basis. The DNA database cannot be used in lieu of the submission of a suspect standard.

When possible, property receipts and/or police reports should indicate specifics about the recovery of biological evidence. The exact location and circumstances surrounding the recovery of the evidence should be noted (example: “swab of the left side of the victim’s neck”). Every item of evidence that the investigator believes will be examined by the Forensic Biology Unit (FBU) should be placed in separate packaging.

The investigating officer must evaluate the recovered evidence and determine which items have potential probative value. Once the recovered evidence has been evaluated, the investigator must submit a written request to the FBU (See section D for instructions). **Evidence will not be examined by the FBU without a written request; this includes the SAK.**

After the request has been submitted, the investigating officer should maintain contact with the assigned forensic scientist to determine the status of the findings. Information learned from the crime laboratory may result in new leads that require additional follow- up investigation.

A written report will be completed by the FBU and sent to the assigned investigator. Note the FBU does not always conduct DNA testing on every piece of potential evidence. It is the investigator’s responsibility to review the FBU report, confirm the evidence tested and request additional testing if appropriate.

Decisions to investigate crimes and collect evidence should never be based on the characteristics of the victim or the assault (example - the victim is a drug addict, runaway or prostitute).

Typically, the Child Protection Team of Palm Beach (CPT) conducts SAK, medical examinations and forensic interviews of children who are victims of sex crimes. Due to considerations unique to children (to include the child’s size and anatomy), the recommended guideline of conducting a SAK up to 120 hours following a sexual assault does not always apply to child victims. Please consult with the on-call CPT case coordinator when the question of whether or not to conduct SAK on a child arises.

C. PROCESSING SEXUAL BATTERY KITS AND CRIME SCENE EVIDENCE

943.326 DNA evidence collected in sexual offense investigations.

- (1) A sexual offense evidence kit, or other DNA evidence if a kit is not collected, must be submitted to a member of the statewide criminal analysis laboratory system under s. 943.326 for forensic testing within 30 days after:

- (a) Receipt of the evidence by a law enforcement agency if a report of the sexual offense is made to the law enforcement agency; or
 - (b) A request to have the evidence tested is made to the medical provider or the law enforcement agency by:
 - i. The alleged victim;
 - ii. The alleged victim's parent, guardian, or legal representative, if the alleged victim is a minor; or
 - iii. The alleged victim's personal representative, if the alleged victim is deceased.
- (2) An alleged victim or, if applicable, the person representing the alleged victim under subparagraph (1)(b)2. or 3. must be informed of the purpose of submitting evidence for testing and the right to request testing under subsection (1) by:
- (a) A medical provider conducting a forensic physical examination for purposes of a sexual offense evidence kit; or
 - (b) A law enforcement agency that collects other DNA evidence associated with the sexual offense if a kit is not collected under paragraph (a).
- (3) A collected sexual offense evidence kit must be retained in a secure, environmentally safe manner until the prosecuting agency has approved its destruction.
- (4) By January 1, 2017, the department and each laboratory within the statewide criminal analysis laboratory system, in coordination with the Florida Council Against Sexual Violence, shall adopt and disseminate guidelines and procedures for the collection, submission, and testing of DNA evidence that is obtained in connection with an alleged sexual offense. The timely submission and testing of sexual offense evidence kits is a core public safety issue. Testing of sexual offense evidence kits must be completed no later than 120 days after submission to a member of the statewide criminal analysis laboratory system.
- (a) The guidelines and procedures must include the requirements of this section, standards for how evidence is to be packaged for submission, what evidence must be submitted to a member of the statewide criminal analysis laboratory system, and timeframes for when the evidence must be submitted, analyzed, and compared to DNA databases.
 - (b) The testing requirements of this section are satisfied when a member of the statewide criminal analysis laboratory system tests the contents of the sexual offense evidence kit in an attempt to identify the foreign DNA attributable to a suspect. If a sexual offense evidence kit is not collected, the laboratory may receive and examine other items directly related to the crime scene, such as clothing or bedding or personal items left behind by the suspect. If probative information is obtained from the testing of the sexual offense evidence kit, the examination of other evidence should be based on the potential evidentiary value to the case and determined through cooperation among the investigating agency, the laboratory, and the prosecutor.
- (5) A violation of this section does not create:
- (a) A cause of action or a right to challenge the admission of evidence.
 - (b) A cause of action for damages or any other relief.

Toxicology examinations are performed on all drug facilitated sexual assault (DFSA) kits submitted to the PBSO Toxicology Unit (see Section F for further information).

D. CRIME LAB – FORENSIC BIOLOGY UNIT

The goal of the PBSO Forensic Biology Unit (FBU) is to offer the highest quality forensic DNA testing program possible to the victims of criminal activity. This is accomplished through a collaborative effort with law enforcement and the judicial system by conducting analysis on probative evidence and testifying to the DNA results in court. The laboratory conducts DNA analysis on crime scene evidence and criminal paternity evidence. In order to assure compliance with national DNA testing standards, the section maintains accreditation through the American Society of Crime Laboratory Directors/Laboratory Accreditation Board and the FBI National Forensic DNA Standards.

The submitting agency must notify the Evidence Coordinator or designee that items in a case need to be analyzed. Cases are generally worked in request date order. Case submission guidelines set the standard requirements for routine submission of evidence to the FBU. **The FBU will not initiate any DNA testing without a DNA Request Form.** Below provides a brief overview for the submission of Sexual Assault and Criminal Parentage cases.

- Submit a completed DNA Request Form (saved as a .pdf file) to dnarequest@pbsso.org
- An electronic copy of the DNA Request Form can be obtained by contacting the Evidence Coordinator at dnarequest@pbsso.org
- An acceptance email will be issued by the Evidence Coordinator after the request has been processed.
- The initial evidence request is limited to a sexual battery evidence collection kit (SAK) and condom(s), if applicable, for sexual assault cases. For criminal parentage the submissions may include a standard from the mother or alleged mother, father or alleged father, the child, or if necessary, the product of conception.
- If the SAK was not completed or the kit is negative, additional items such as underwear, clothing or bedding may be submitted in separate submissions.
- If the SAK is positive no additional items will be accepted unless case circumstances (such as multiple perpetrators) dictate the need for additional processing.
- Within the case scenario section – clearly describe what occurred and how the items of evidence you are requesting relate directly to the crime.
- Reference standards are necessary. This information will help streamline the testing process. For example:
 - Did suspect wear a condom?
 - Did the suspect ejaculate?
 - Did you submit any recent consensual sex partner's elimination standard?
 - Did you submit a suspect's standard?

- Any request for the expeditious processing of a case will be considered after written or verbal communication with the FBU. Formal documentation from the requestor's supervisor must be submitted to the Evidence Coordinator or FBU Manager detailing the reasons for the appeal. The FBU Manager or designee will decide if a case(s) warrants expeditious processing.

The FBU is one of many county labs that utilize the local Combined DNA Index System (CODIS) database. The purpose of CODIS is to create a national information repository where law enforcement agencies can share DNA information obtained from convicted offenders and forensic evidence. This database allows agencies to cross-reference case evidence profiles from one agency with case evidence profiles from other agencies. CODIS contains information on DNA identification records and DNA analyses that are maintained by Federal, State and local law enforcement agencies. Confidentiality of the DNA samples is maintained as per the FBI's Memorandum of Understanding and the DNA Identification Act of 1994.

E. BIOLOGICAL PROCESSING LABORATORY

The Biological Processing Laboratory (BPL) is an independent laboratory created through a grant for the PBSO FBU Efficiency Improvement Program, in collaboration with Boca Raton Police Department. BPL conducts biological screening on evidentiary items from all case types. This includes the location and identification of biological fluids, swabbing items for the presence of skin cells and collecting hair, fiber and debris. The stains and swabs collected are sent to the PBSO FBU for DNA analysis. Currently BPL only provides services to the following Police Departments; Boca Raton, Boynton Beach and Delray Beach.

BPL follows the guidelines and standard requirements for the submission of evidence that is set by the PBSO FBU. The BPL will not initiate any biological screening without a Serology Request Form. A BPL Serology Request Form must be e-mailed to BPL@myboca.us.

F. CRIME LAB – TOXICOLOGY UNIT

Drug facilitated sexual assaults (DFSA) occur when a person is subjected to nonconsensual sexual acts while they are incapacitated or unconscious due to the effect(s) of ethanol, drugs and/or other intoxicating substances and are therefore prevented from resisting and/or unable to consent.

The specimens of choice for toxicology regarding suspected DFSA cases are urine and blood. Specimens should be collected from the victim if less than 120 hours have elapsed since the incident.

Specimens should be collected using the PBSO DFSA kits available at the Butterfly House and from Palm Beach County Victim Services. The PBSO DFSA kit contains two 10 mL tubes containing a preservative (NaF) and an anticoagulant (EDTA or Potassium Oxalate). Two full 10mL tubes of blood and 50 mL of urine should be collected whenever possible. The DFSA kit should be delivered to the

laboratory as soon as possible. If delivery to the laboratory cannot take place on the day of collection, the kit should be refrigerated until delivery. An evidence refrigerator is available to PBSO deputies on the second floor of Headquarters, outside of the Laboratory Evidence Unit for 24 hour / 7 day-a-week evidence delivery.

The DFSA kit also contains a DFSA form that should be completed by the investigator or SANE nurse. Information on this form is required to ensure proper analysis of the evidence is performed. Toxicology examination of DFSA kits is performed on all DFSA kits submitted to the laboratory.

If a PBSO DFSA kit is not available, collect the blood specimens in two 10 mL grey stopper vials which contain a preservative (NaF) and an anticoagulant (EDTA or Potassium Oxalate). The urine specimen can be collected in a urine container, available at most medical facilities. Package the blood and urine containers and transport to the laboratory. If delivery to the laboratory cannot take place on the day of collection, the kit should be refrigerated until delivery.

Similar to the FBU, the Toxicology Unit provides support to local police departments and numerous state and federal agencies.

G. GUIDELINES FOR FORENSIC EXAMINATIONS FOR SEXUAL ASSAULT VICTIMS NOT REPORTING TO LAW ENFORCEMENT

Florida law states victims of sexual assault do not need to participate in the criminal justice system or cooperate with law enforcement in order to obtain a forensic medical exam. These incidents are sometimes referred to by law enforcement as Non-Reporting cases. Forensic exams to these “non-reporting” victims should be completed within the same time frame and to the same standards as those provided to victims who immediately report to law enforcement.

Please see the *Palm Beach County Forensic Exam Protocol for Sexual Assault Victims Not Reporting to Law Enforcement* for a detailed guide concerning this topic.

A victim of sexual battery, who does not want to report to law enforcement, can request a forensic medical examination. Palm Beach County Victim Services shall be contacted by hospital staff and an advocate will respond and meet with the victim. All sexual battery victims are entitled to advocacy, confidentiality and information regarding their rights.

A SAK will be completed by a SANE nurse or emergency room personnel. Toxicology samples will also be taken if applicable.

The law enforcement agency of jurisdiction (based on hospital location) will be contacted and an officer/deputy will respond to take custody of the SAK, toxicology kit and any additional evidence from the SANE Nurse or hospital personnel completing the examination.

Clothing or other evidence will be collected using standard evidentiary protocols, if the victim chooses to provide these items. Hospital emergency rooms shall not hold a completed SAK, toxicology kit or other evidence for long term storage.

The name of the victim shall not be recorded on the outside packaging of the SAK, toxicology kit or law enforcement evidence packaging. The SAK and toxicology kit will be deposited in the law enforcement agency's secure storage area per standard evidence protocols.

Any law enforcement contact with a non-reporting victim should be facilitated through the assigned victim advocate. Law enforcement should not contact the victim directly. The evidence will be stored by law enforcement for - a period of time determined by the agency to reflect the potential investigative use of the evidence not to be less than 12 months.

If the victim decides to proceed with a law enforcement investigation they will contact Victim Services and make the request. An advocate will coordinate the release of SAK and forensic exam forms and make the notification to the law enforcement agency of jurisdiction to commence the investigation. Law enforcement has 30 days to submit for process.

Victim Services will contact the victim prior to the destruction of any evidence to confirm they do not want to proceed with a criminal investigation. If the victim does not want to report the sexual battery to law enforcement, Victim Services will notify the law enforcement agency in possession of the evidence that it can be destroyed by submitting an evidence destruction request form. A supplemental report should be completed by the law enforcement agency in possession of the evidence reflecting the updated information from victim services.

For law enforcement personnel – do not confuse a “non-reporting victim” with a victim who is willing to report a crime but does not want to prosecute the offender or cooperate with the investigation aka Waiver of Prosecution. These cases should be investigated to the extent your agency requires and documented with a crime report.

Note: These recommended guidelines do not supersede any laws or policies covering State of Florida mandatory reporting of crimes against children.

H. STATE ATTORNEY CONSIDERATIONS

The Palm Beach County State Attorney's Office has committed a full-time staff, known as the Special Victims Unit (SVU) to prosecute sex crime cases. SVU prosecutors and investigators are available to law enforcement officers 24 hours-a-day and can be reached at 561-308-4211 or 561-309-1821. The following are common issues seen from a prosecutor's perspective:

Statute of Limitations: Florida Statute 775.15

Offense not time barred between July 1, 2004 & June 30, 2006:

(15) Prosecution for sexual battery (Chapter 794) or lewd or lascivious (Sections 800.04 or 825.1025) may be commenced within 1 year after the date on which the identity of the accused is established, or should have been established by the exercise of due diligence, through the analysis of deoxyribonucleic acid (DNA) evidence, if a sufficient portion of the evidence collected at the time of the original investigation and tested for DNA is preserved and available for testing by the accused.

Offense not time barred on or after July 1, 2006:

(16) Prosecution for the following offenses may be commenced at any time after the date on which the identity of the accused is established, or should have been established by the exercise of due diligence, through the analysis of deoxyribonucleic acid (DNA) evidence, if a sufficient portion of the evidence collected at the time of the original investigation and tested for DNA is preserved and available for testing by the accused.

1. Aggravated battery or any felony battery offense under chapter 784.
2. Kidnapping under s. 787.01 or false imprisonment under s. 787.02.
3. An offense of sexual battery under chapter 794.
4. A lewd or lascivious offense under s. 800.04, s. 825.1025, or s. 847.0135(5).
5. A burglary offense under s. 810.02.
6. A robbery offense under s. 812.13, s. 812.131, or s. 812.135.
7. Carjacking under s. 812.133.
8. Aggravated child abuse under s. 827.03.

Exercise of Due Diligence -Recommendations:

1. Take elimination/suspect standards from anyone that is reasonably associated with the case.
2. Submit DNA evidence to the DNA Lab within a short time after all DNA is obtained.

Case Law:

State v. Bryson, 42 So.3d 852 (1st DCA 2010): Attempted robbery that occurred on April 14, 2005 was not time barred under 755.15(16) (a) even though the Defendant was not charged until March 11, 2009. “The legislature can extend the limitations period without violating the constitution prohibition against ex post facto laws if it (a) does so before the prosecution is barred by the old statute, and (b) clearly indicates that the new statute is to apply to cases pending when it becomes effective.” (Note: “The court found the State exercised due diligence in establishing [the Defendant’s] identity through DNA analysis” because the law enforcement “was diligent in the collection of the materials and in ascertaining who was alleged to have been...involved in the [crime].”)

Lawson v. State, 51 So.3d 1287 (2nd DCA 2011): Prosecution for lewd or lascivious battery on an elderly person was time barred where crime occurred on January 26, 2003 and the Defendant was not charged until November 20, 2008. This is true even though the Defendant's identity was not discovered until November 2008 through the use of DNA. (Note: This case appears to be inconsistent with the holding on Bryson and inconsistent with the plain language of 775.15(15)(b).)

Obtaining DNA Samples:

Consent vs. Search Warrant:

1. DNA Samples, whether from a victim or from a suspect, must be taken either with consent or through a search warrant. There is an exception for exigent circumstances, however, this would only apply in extremely rare cases.
2. Consent means a knowing and voluntary waiver of a person's 4th Amendment right against search and seizure, which is not the result of express or implied duress or coercion.
3. Consent Factors:
 - a. Is the person in custody?
 - b. How significant is law enforcement presence?
 - c. Did law enforcement tell the truth?
 - d. Did the person have knowledge of right to refuse?
 - e. What is the person's level of education?
 - f. What is the person's age?
 - g. Was the person told of any consequences of denying the search?
4. Do not ever tell a person that if they do not consent then you will just go get a search warrant for their DNA.
5. Practical Tips:
 - a. Search warrants must be based upon probable cause, but consent has no evidence requirement.
 - b. Consent should be audio or video recorded or memorialized with a written consent form.
 - c. Take DNA confirmation standards from all persons who's DNA may be detected in analysis.
 - d. When a suspect is identified through a CODIS match, the investigating officer must obtain a search warrant for the suspect's DNA standard as confirmation.
 - e. When in doubt, speak to an SVU ASA about consent or a search warrant.

Exigent Circumstances to obtain DNA from a suspect:

1. Suspect should be detained and prevented from destroying the evidence. Then immediately call an SVU ASA to determine if a search warrant is necessary.

Unconscious/ Unable to Consent Victims:

Sexual Battery Definition: oral, anal, or vaginal penetration by, or union with, the sexual organ of another or the anal or vaginal penetration of another by any other object; however, sexual battery **does not include an act done for a bona fide medical purpose**. Fla. Stat. 794.011(1)(h).

Bona Fide Medical Purpose

1. "...Implies some objective basis for believing sexual contact or penetration is Justified." State v. Poole, 489 N.W.2d 537 (Minn. Ct. Appeals 1992).
2. "...Not taken in good faith, honestly, and sincerely in the course of investigating, preventing, alleviating, or curing a disease or malady." People v. Terry, 720 P.2d 125 (Colo. Sup. Ct. 1986).
3. Practical Tips:
 - a. Never perform or direct another person to collect an SAK on an unconscious or unable to consent victim.
 - b. Immediately contact an SVU prosecutor if you believe it is necessary to collect an SBECK on an unconscious or unable to consent victim.

I. TRAINING

FDLE: Criminal Justice Standards & Training Commission - Florida Officer Mandatory Retraining Requirements: Florida Officers Must Complete 40-Hours every 4-Years to Maintain Certification. Sexual assault topics are typically covered in the "Juvenile Sex Offender" training course.

It is recommended that PBC Law Enforcement Officers receive training that may include:

1. Use and application of current Florida and Federal statutes as they relate to sexual violence
2. PBC SART procedures and updates
3. Dynamics of sexual violence
4. Physical evidence unique to sexual violence cases
5. Best practices in forensic evidence/DNA collection
6. Duties and responsibilities of law enforcement in response to sexual violence calls and assisting victims

Periodic and/or roll call training should address the components of this policy and legal/ legislative updates related to sexual violence. The Palm Beach County Victim Services Certified Rape Crisis Center and members of the SART will provide victim centered training as follows:

1. Training at individual police department roll calls and block trainings
2. SART Committee block trainings
3. National trainings via
 - a. hosting a national level speaker event

- b. supporting/coordinating law enforcement, SAO, nurses, SART members to attend national and statewide trainings
- 4. DVD trainings made available via internet/websites

Agencies should update all related general orders, protocols and in-service training coursework. SART requests that all updated protocols be sent to Palm Beach County Victim Services/SART.

J. GLOSSARY

Allele - The characteristics of a single copy of a specific gene, or of a single copy of a specific location on a chromosome

Anticoagulant (Toxicology) - Chemical added to blood collection tubes to prevent blood from clotting

Autosomal DNA - DNA found in chromosomes which are not sex chromosomes

Butterfly House - Operated by Palm Beach County Victim Services & Rape Crisis Center, this facility is exclusively designed for forensic sexual assault examinations and is located adjacent to the Emergency Room at Wellington Regional Medical Center, 10101 West Forrest Hill Blvd.

Chromosome - The biological structure by which hereditary information is physically transmitted from one generation to the next; located in the cell nucleus, it consists of a tightly coiled thread of DNA with associated proteins and RNA; the genes are arranged in linear order along the DNA

Combined DNA Index System (CODIS) - The generic term used to describe the FBI's program of support for criminal justice DNA databases as well as the software used to run National DNA Index System (NDIS) databases; CODIS is made up of the National DNA Index System (NDIS), the State DNA Index System (SDIS) and Local DNA Index Systems (LDIS)

DNA (Deoxyribonucleic acid) - Often referred to as the "blueprint of life;" genetic material present in the nucleus of cells which is inherited from each biological parent that determines each person's individual characteristics. An individual's DNA is unique except in cases of identical twins

DNA Profiling - The result of determining the relative positions of DNA sequences at several locations on the molecule; each person (except identical twins) has a unique DNA profile when used in the context of the CODIS database, which evaluates 13 specific DNA locations

DNA Fingerprinting - Analyses of the lengths of the fragments reveal that when looking at multiple VNTRs (variable number of tandem repeats) within and between individuals, no two people have the same assortment of lengths, except identical twins;

this technique became known to the public as “DNA fingerprinting” because of its powerful ability to discriminate between unrelated individuals

Epithelial cells - Cells that cover the inner and outer linings of body cavities

Forensic DNA Analysis - The process of identifying and evaluating biological evidence in criminal matters using DNA technologies

Genotype - The genetic constitution of an organism, as distinguished from its physical appearance (its phenotype); the designation of two alleles at a particular locus is a genotype

Locus - The specific physical location of a gene on a chromosome; the plural form is loci

Low Copy Number Analysis - Is a DNA profiling technique used to analyze samples containing a small amount of DNA (approximately 15 diploid cells or less). This type of analysis uses enhanced methods to increase the sensitivity of detection

Mitochondrial DNA (mtDNA) - DNA located in the mitochondria found in each cell of a body; sequencing of mitochondrial DNA can link individuals descended from a common female ancestor

National DNA Index System (NDIS) - Authorized by the DNA Identification Act of 1994, the FBI administers this national index. NDIS enables comparison of DNA profiles associated with a crime scene to DNA profiles collected from known convicted offenders, as well as to other crime scene profiles. DNA profiles uploaded to NDIS are searched against the other DNA profiles submitted by other participating states

Nuclear DNA - DNA located in the nucleus of a cell

Partial DNA Profile - A DNA profile for which typing results are not obtained at all tested loci

Preservative (Toxicology) - Chemical added to blood collection tubes to ensure stability of sample and prevent changes in concentration of alcohol or any drug present

Quality Assurance Standards (QAS) - Quality assurance methods developed by the Scientific Working Group of DNA Analysis and Methods (SWGDM). QAS provides guidelines to ensure the quality and integrity of data generated by the laboratory and uploaded into the CODIS database(s); published by the FBI

Reference Samples - Material collected from a verifiable/documented source such as saliva swabs or blood samples taken from a known individual

Sexual Assault Nurse Examiner (SANE) - Specially trained nurse who perform sexual assault exams using a Sexual Assault Kit (SAK)

Sexual Assault Response Team (SART) - Palm Beach County law enforcement, victim services, fire rescue, health care providers, prosecutors and survivors have formed a multidisciplinary team that creates a “victim centered” response to sex crimes allegations and improves the treatment of victims, conviction rates, efficiency and protection of the community

Short tandem repeat (STR) - Multiple copies of a short DNA sequence arranged in direct succession in particular regions of chromosomes

Y-STR - STR located on the Y chromosome; often examined when investigating sexual assaults involving male suspects

K. RESOURCES

American Academy of Pediatrics, *Forensic Evidence Collection and DNA Identification in Acute Child Sexual Assault*, 2011

American Academy of Pediatrics, *Collection of Forensic Evidence From Pediatric Victims of Sexual Assault*, 2011

Bureau of Justice Assistance www.Forensicsciencesimplified.org

Florida Council Against Sexual Violence (FCASV)

Florida Office of the Attorney General, *Sexual Assault Protocol*, 2007

International Association of Chiefs of Police, *Investigating Sexual Assaults*, 2005

Journal of Child Sexual Abuse, *Examination Issues and Techniques Conducting the Medical History*, 2011

Journal of Child Sexual Abuse, *Timing of the Medical Examination*, 2011

National Institute of Justice, *Solving Sexual Assaults: Finding Answers Through Research*

Palm Beach County Forensic Exam Protocol for Sexual Assault Victims Not Reporting to Law Enforcement

Palm Beach County SART Law Enforcement Training DVD, 2012

PERF, *Improving the Police Response to Sexual Assault*, 2012

Society of Forensic Toxicologists (SOFT), *Fact Sheet DFSA*

State of Florida Sexual Assault Response Team (SART)