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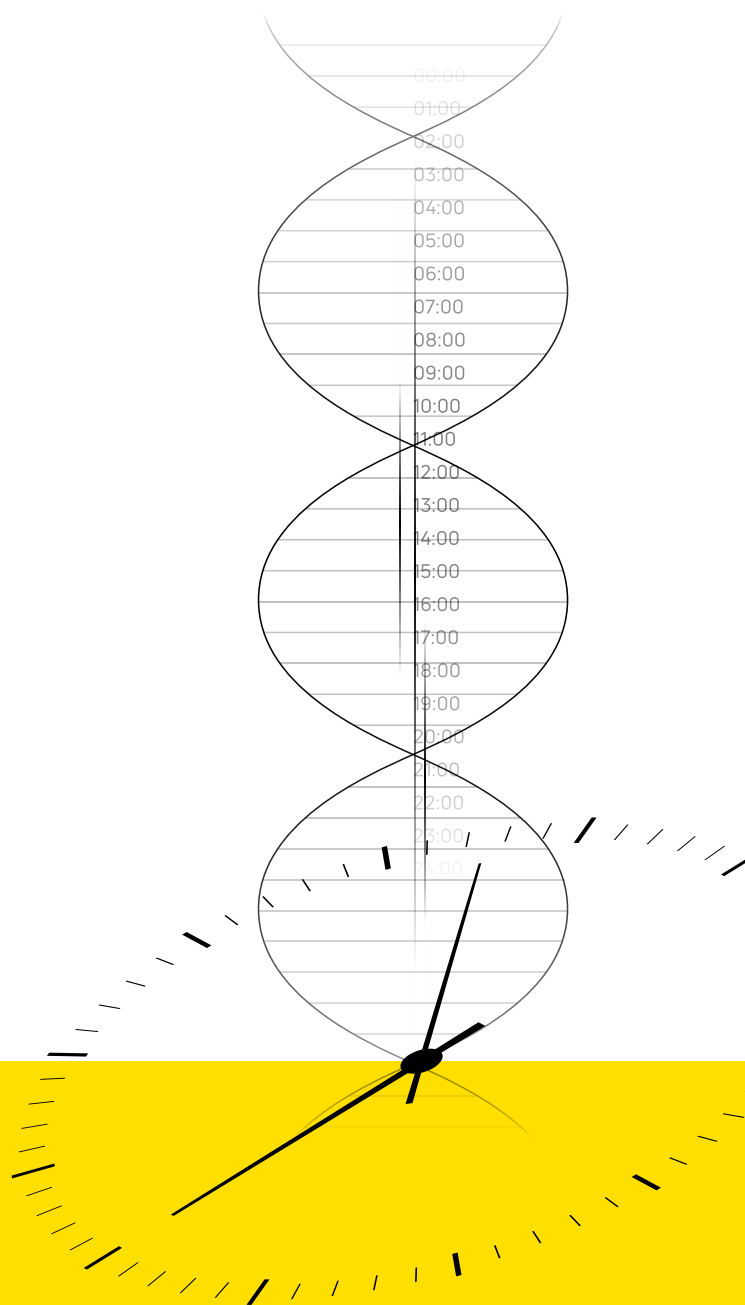
# THE NATIONAL DNA DATA BANK OF CANADA

Annual Report 2016/2017



Royal Canadian Mounted Police  
Gendarmerie royale du Canada

Canada



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**NATIONAL DNA DATA BANK OF CANADA**

Forensic Science and Identification Services,  
Royal Canadian Mounted Police  
P.O. Box 8885, 1200 Vanier Parkway,  
Ottawa, Ontario K1G 3M8  
[www.rcmp-grc.gc.ca/nddb-bndg](http://www.rcmp-grc.gc.ca/nddb-bndg)

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# TABLE OF CONTENTS

<b>Message from the Commissioner, Royal Canadian Mounted Police</b>	<b>2</b>
<b>Quick Facts</b>	<b>3</b>
<b>The National DNA Data Bank</b>	<b>4</b>
Increased Efficiency	<b>6</b>
Submissions Received	<b>7</b>
Privacy of Information	<b>8</b>
NDDB Indexes	<b>8</b>
Comparing DNA Profiles	<b>9</b>
Before and After the NDDB	<b>10</b>
International Participation	<b>11</b>
The National Missing Persons DNA Program	<b>11</b>
The Value of Secondary Offence Submissions	<b>12</b>
Process for Reporting a DNA Match/Process for Confirming a DNA Match	<b>13</b>
<b>High Impact: One Day in the NDDB</b>	<b>14</b>
<b>Success Stories</b>	<b>16</b>
<b>National DNA Data Bank Advisory Committee</b>	<b>22</b>
<b>Key Statistics</b>	<b>23</b>
<b>Financial Statement</b>	<b>29</b>
<b>Appendix: Definitions of Designated Offences</b>	<b>30</b>

# MESSAGE FROM THE COMMISSIONER, ROYAL CANADIAN MOUNTED POLICE

I am very proud to present the 2016–2017 National DNA Data Bank (NDDB) Annual Report, a straightforward account of the Data Bank's operating processes and a record of its most recent accomplishments.

In 1989, the RCMP used DNA analysis for the first time in a sexual assault investigation. Since that time, DNA has gone from being an unprecedented innovation to an indispensable tool in countless criminal investigations and judicial proceedings.

DNA analysis is essentially a comparison technology. To identify someone, biological evidence found at a crime scene is used to generate a DNA profile, which is then compared to the DNA profiles of convicted offenders and crime scene DNA profiles in the NDDB. If a match is found, the NDDB has helped an investigator identify a potential suspect or link serial crimes.

The efficiencies the NDDB provides are many and varied. For example, DNA can be used to rapidly identify or rule out suspects, significantly mitigating the length and cost of investigations. Some cold cases have been solved decades after the crime occurred thanks to DNA technology. In these cases, comparing the original crime scene DNA evidence to the NDDB's Convicted Offender Index has given investigators valuable new leads. There are also countless examples in which DNA collected from individuals convicted of committing secondary offences, such as drug offences, has helped solve more serious primary offences such as murder. This emphasizes the importance of obtaining orders



to collect DNA samples from convicted offenders, even in cases when collection is not mandatory. As the number of DNA profiles in the Data Bank grows, it becomes a more powerful investigative tool.

DNA's impact in the court room is also worth noting. Upon learning that a prosecutor has conclusive DNA evidence, many suspects will simply plead guilty rather than contest their charges. This is beneficial to crime victims because it reduces the time it takes to resolve cases and obtain closure, and to taxpayers because it reduces the cost of many prosecutions.

While DNA evidence is only one of the instruments that investigators use to solve crimes, its conclusiveness makes it one of the most effective. There are no shortcuts to conducting thorough investigations. Established policing methods and investigators' reliable instincts remain indispensable. Rather than replacing traditional methods of investigation, the NDDB bolsters this work.

While great technological strides have been made since the NDDB was first established, further innovation will continue to improve forensic DNA analysis, a prospect I find extremely encouraging.

**Bob Paulson**  
Commissioner

# QUICK FACTS

Convicted Offender Samples Received  
in 2016/17<sup>1</sup>

**22,388**

Increase in Crime Scene Index in 2016/17

**12,937**

Offender Hits (Convicted Offender to  
Crime Scene) in 2016/17

**4,946**

Forensic Hits (Crime Scene to Crime Scene)  
in 2016/17

**562**

Investigations Assisted by the NDDB in  
2016/17 (Offender and Forensic Hits)

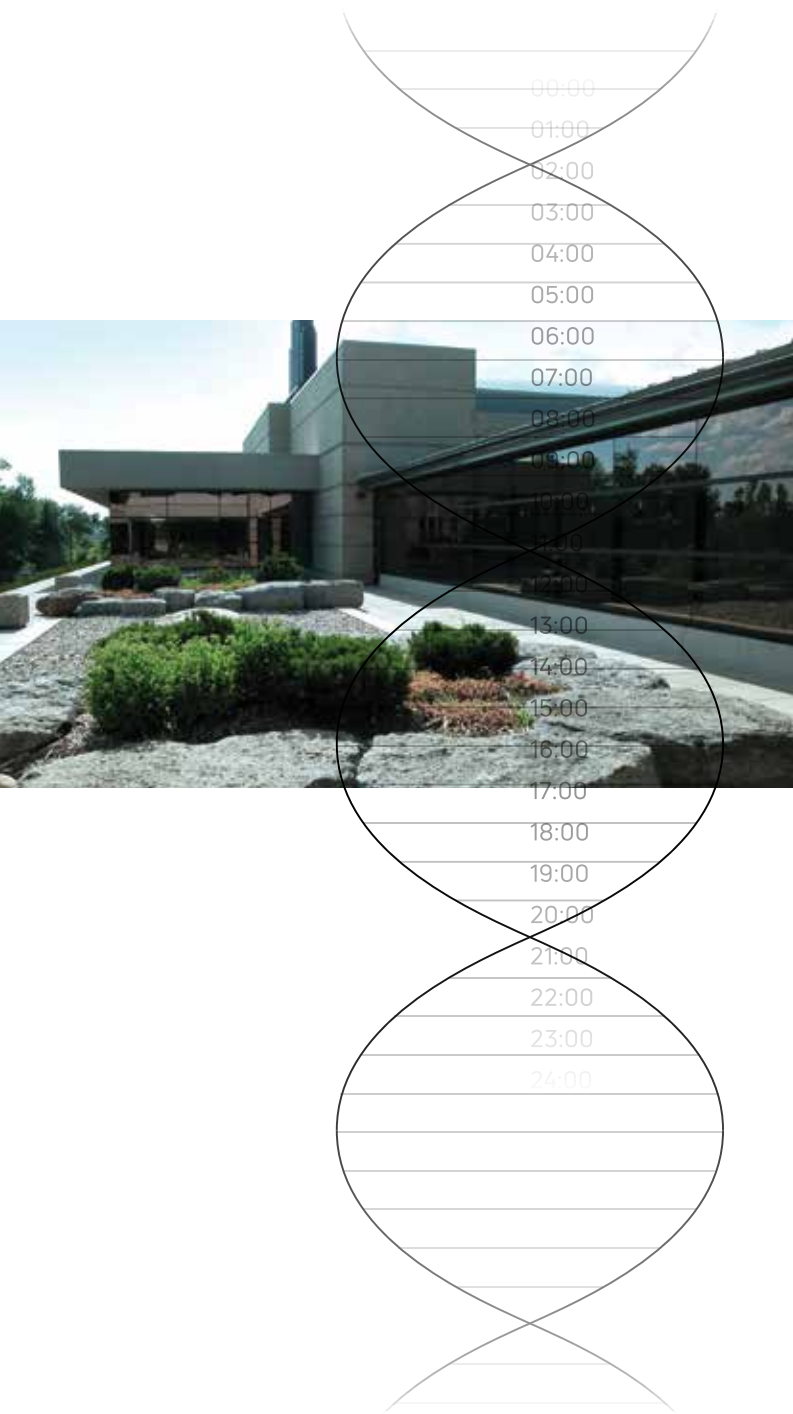
**5,508**

Investigations Assisted by the NDDB since  
June 30, 2000 (Offender and Forensic Hits)

**49,524**

<sup>1</sup> 2016/17 refers to the NDDB's fiscal year from April 1, 2016  
through March 31, 2017





# THE NATIONAL DNA DATA BANK

**T**he NDDB is one of Canada's greatest law enforcement resources, a collection of hundreds of thousands of DNA profiles stored anonymously to help investigators across the country solve a range of crimes. The main goals of the Data Bank are simple: link crime scenes across jurisdictional lines, help identify or eliminate suspects and determine whether a serial offender has been involved in certain crimes.

When the NDDB was established in 2000, DNA analysis was a relatively new procedure but since then, it has become routine, saving time and money by helping to focus investigations.

The NDDB consists of two main indexes: the Convicted Offender Index (COI) and the Crime Scene Index (CSI). These indexes provide assistance to criminal investigation in two ways:

- Comparing DNA found at crime scenes against the DNA of convicted offenders (CSI to COI). When a match is made, it can help identify suspects. If no match is made, it can help eliminate suspects, which is equally important. An “offender hit” is the term used to describe this type of DNA match.
- Comparing DNA found at different crime scenes (CSI to CSI). When a match is made between DNA profiles found at separate crime scenes, it can help link crimes for which no suspects have been developed. This determines whether a serial offender is involved in a particular case. A “forensic hit” is the term used to describe this type of DNA match.



The NDDB was created by an act of Parliament on June 30, 2000. Since that time, on behalf of the Government of Canada, the RCMP has been the steward of the NDDB, which it operates for the benefit of Canada’s entire law enforcement community. For a detailed chronology of DNA legislation in Canada, please visit the NDDB website:

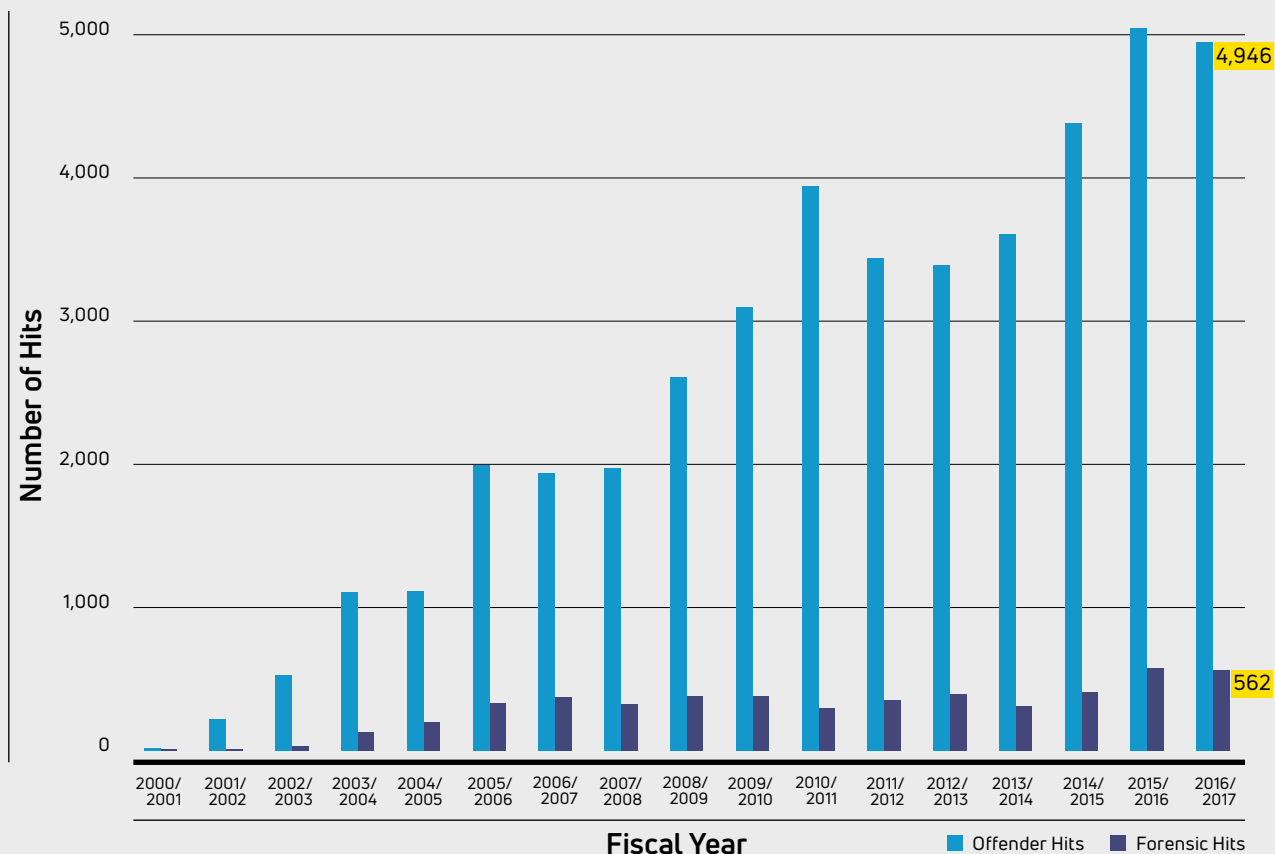
<http://www.rcmp-grc.gc.ca/nddb-bndg/index-accueil-eng.htm>

## INCREASED EFFICIENCY

As more DNA profiles are added to the NDDDB, more matches are made in less time. When the NDDDB first began operating in 2000, its two indexes contained relatively few DNA profiles, so it took

more than three years to reach the milestone of 1,000 offender hits. Since 2010/11, the number of DNA profiles in the NDDDB has increased dramatically, so the NDDDB now takes an average of just three months to achieve 1,000 offender hits.

## OFFENDER AND FORENSIC HITS





## SUBMISSIONS RECEIVED

Every year, the NDDB processes approximately 40,000 submissions, consisting of two types: biological samples and endorsements. A biological sample submission contains documentation and a biological sample collected from a convicted offender. The NDDB uses the biological sample to generate a DNA profile of the offender then enters the profile into the Convicted Offenders Index (COI). An endorsement submission is sent to the NDDB when the convicted offender's DNA profile is already in the COI. Before executing a new DNA order or authorization, police officers must query the Canadian Police Information Centre (CPIC) to determine whether a convicted offender's DNA profile is already in the NDDB. Endorsements therefore consist of documentation only. The endorsement process ensures that a convicted offender's DNA profile remains in the NDDB *if it arrives in the NDDB prior to:*

- The conviction for which the original DNA order was made is quashed on appeal; or
- The original order/authorization is quashed on appeal; or
- The retention period has expired because the person was either:
  - Convicted as a young person; or
  - Discharged under Section 730 C.C. of a designated offence.

When the NDDB receives either a biological sample or an endorsement submission, the documentation is reviewed to ensure two things: first, that the DNA collection order was issued for a criminal offence for which DNA can legally be collected and second, that all of the offender's personal information accompanying the submission is complete and accurate. All submissions are recorded in the NDDB's internal tracking system without any of the offender's personal information. Documentation for both biological sample submissions and



endorsements is sent to the RCMP's Canadian Criminal Real Time Identification Services (CCRTIS) section so it can be certified, associated with an individual by fingerprint comparison and recorded in the individual's criminal record.

In February 2013, the NDDB began identifying duplicate sample submissions by conducting CPIC checks to ensure that convicted offenders' DNA profiles were not already in the Data Bank. Since that time, the NDDB has received 4,381 biological samples that were found to be duplicates prior to being sent for analysis. These are converted to endorsement submissions. By doing so, the NDDB is reducing the cost associated with unnecessary analysis of duplicate biological samples. See Table 3 for information about duplicate samples that were not identified prior to laboratory analysis.



## PRIVACY OF INFORMATION

The NDDB adheres to the *DNA Identification Act*, legislation that balances individuals' privacy rights with investigators' need to identify suspects. Stringent procedures govern the handling of convicted offenders' biological samples and the DNA profiles generated from them, ensuring that an individual's privacy is always protected.

From the moment a convicted offender's DNA sample arrives at the NDDB, the donor's identity is separated from his or her genetic information and is subsequently identified by a numeric bar code. The numeric identifiers are the only link connecting personal information, the biological sample and the DNA profile. Since a donor's personal information is considered protected information, it is kept in a separate registry, the RCMP's Canadian Criminal Real Time Identification Services, which NDDB staff cannot access.

All crime scene DNA samples are also identified using a unique numeric identifier. Since all DNA profiles processed by the NDDB have numeric identifiers, staff members never know whose DNA they are processing.

## NDDB INDEXES

The NDDB operates a laboratory where it relies on cutting-edge robotic technology to process an average of 20,000 DNA samples collected from convicted offenders every year. Once processed, the DNA profiles are entered into the NDDB's Convicted Offender Index.

When someone is found guilty of committing a crime for which DNA can be obtained, and a judge has issued a DNA order, an experienced peace officer will collect a sample of that person's DNA by taking a blood, buccal or hair sample. Kits designed specifically for the NDDB are used for collecting these bodily substances:

- **Blood:** The sample is obtained by using a sterile lancet to prick the fingertip
- **Buccal:** The inside of the mouth is rubbed with a foam applicator to obtain skin cells
- **Hair:** Six to eight hairs are pulled out with the root sheath attached

It is worth noting that while all three types of biological samples have been legally approved for collection, more than 98% of samples taken from convicted offenders are blood samples. The NDDB encourages the collection of blood samples because blood has proven to be more reliable than hair or buccal samples in generating high-quality DNA profiles that are suitable to be entered into the Convicted Offender Index (COI). As of March 31, 2017, the COI contained 346,160 DNA profiles.

The COI is composed of two categories of submissions:

1. **DNA Orders:** Includes DNA samples collected from offenders convicted of DNA designated offences committed at any time, including before the NDDB was created in June 2000. The court may grant a DNA order when an offender is sentenced or discharged.

2. **Retroactive Authorizations:** A biological sample taken from an offender who was found guilty of a designated *Criminal Code* offence before June 30, 2000. Retroactive Authorization is granted as per qualifying criteria set out in s.487.055 of the *Criminal Code*.

As of March 31, 2017, approximately 6,244 offenders qualified for inclusion in the retroactive category as defined by Bills C-3 and C-13/C-18. Under this provision, the NDDDB received 5,032 submissions. The NDDDB is still pursuing 78 files for which DNA authorization is awaiting execution or court application. For a variety of reasons (e.g. authorization not granted, the offender is deceased or cannot be located) the remaining 1,134 files have been closed.

Convicted offender biological samples are the only type of DNA submission that the NDDDB processes in its laboratory. All crime scene DNA evidence is collected by investigators and examined by forensic laboratories across Canada to generate DNA profiles. Only a DNA profile derived from a designated offence crime can be added by an authorized laboratory to the NDDDB's Crime Scene

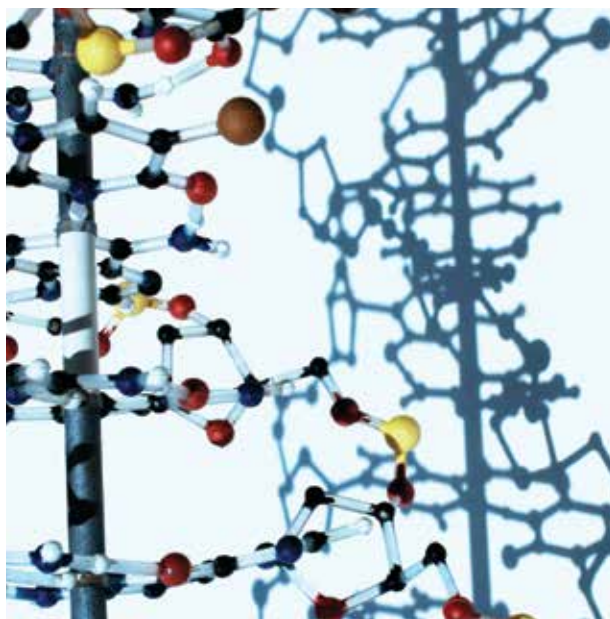
Index. As of March 31, 2017, the Crime Scene Index contained 130,100 DNA profiles. The following forensic laboratories are authorized to add DNA profiles to the CSI:

- The RCMP National Forensic Laboratory Services in Ottawa, Edmonton and Vancouver
- The Centre of Forensic Sciences in Toronto and Sault Ste. Marie
- The Laboratoire de sciences judiciaires et de médecine légale in Montréal

## COMPARING DNA PROFILES

All DNA samples are catalogued and barcoded when they enter the NDDDB. The DNA profiles are subsequently compared using a unique network and software program, the Combined DNA Index System (CODIS), developed by the FBI and the US Department of Justice. CODIS has become an internationally accepted tool for forensic laboratories, allowing DNA profile information to be compared using a standard, secure format. CODIS enables the comparison of CSI and COI profiles and can execute the comparison process several times each day. Each new DNA profile entered into one of the NDDDB's two main indexes is automatically compared against all existing profiles.

Depending on the technology used, DNA profiles are developed using information found at 14 to 18 specific regions of the DNA molecule. Each region consists of two markers. The regions are chosen because they are known to have a high degree of variability among individuals, which allows the NDDDB to identify offenders. Identical twins are the only exception because their DNA profiles are identical. The *DNA Identification Act* makes it clear that DNA profiles in the NDDDB can only be used for law enforcement purposes. The NDDDB does not share DNA information with anyone other than law enforcement agencies. DNA profiles held within the NDDDB are considered anonymous. With the exception of gender, they do not reveal any medical or physical information about the donor.







## BEFORE AND AFTER THE NDDB

One of the greatest advantages the NDDB provides to investigators is its national perspective. Crime scene DNA profiles from all provinces and territories are stored in the CSI, and the DNA profiles of convicted offenders from all across the country are stored in the COI. Criminals move around so without the NDDB, establishing links from one police jurisdiction to another would be extremely difficult.

Before the NDDB existed, if an unknown male DNA profile was found on a female sexual assault victim, it would be of limited use unless the investigator already had a suspect in mind, someone whose DNA profile could be used for comparison. Before 2000, there was no data base of convicted offend-

ers against which an unknown DNA profile could be compared. Today, it would be searched immediately against the NDDB's COI to see if it matched a known offender. As soon as a match is found, the investigation can be focused quickly.

The NDDB presents the same type of advantage for crime scene DNA profiles. Without the NDDB, a murder in British Columbia would likely never be linked to a murder in Nova Scotia, even if the same suspect's DNA profile was found at both crime scenes. The NDDB provides investigators with DNA information that is not restricted by geographical or jurisdictional boundaries, allowing them to quickly establish links they would not otherwise be able to verify.

## INTERNATIONAL PARTICIPATION

The NDDDB shares DNA information through an international information sharing agreement with INTERPOL, approved by the Government of Canada, which limits its use to the investigation and prosecution of criminal offences. Since the international agreement was signed in 2002, the NDDDB has received 1,623 incoming international requests to search the Convicted Offender Index and the Crime Scene Index. These searches produced 6 offender hits and 9 forensic hits. Since April 2002, the NDDDB sent 257 requests to other INTERPOL countries for comparison of DNA profiles developed from crime scene samples, resulting in 6 offender hits and 2 forensic hits.

## THE NATIONAL MISSING PERSONS DNA PROGRAM

In December 2014, Bill C-43 received Royal Assent (Statutes of Canada 2014, c. 39). The Bill amends the *DNA Identification Act* to expand the national use of the NDDDB to provide support for missing persons and unidentified human remains investigations by creating three new humanitarian DNA indexes. The Bill also allows for the creation of two new criminal DNA indexes which will strengthen the NDDDB's support for criminal investigations.

In accordance with Canadian law, once in force, this new legislation will allow DNA profiles from missing persons, the relatives of missing persons and human remains to be collected and added to the NDDDB. The privacy of personal information continues to be of the utmost importance. Legislation governing the National Missing Persons DNA Program (NMPDP) will protect Canadians' privacy rights by using a number of safeguards to ensure that DNA profiles contained in the NDDDB are used only for their intended purpose.

The NMPDP is a joint effort between the National Centre for Missing Persons and Unidentified Remains (NCMPUR) and the NDDDB. Once the NMPDP is operational, the NCMPUR will provide investigators with best practices and advice on using the new DNA indexes, authorize the submission of DNA profiles in accordance with legislation and provide investigators with information about potential DNA matches that occur.

The program is projected to start accepting DNA profiles beginning in the spring of 2018.





## THE VALUE OF SECONDARY OFFENCE SUBMISSIONS

When the NDDDB first opened, DNA could only be collected from people found guilty of committing crimes legislated and categorized as primary or secondary offences. Both categories contain violent offences, but primary offences, such as sexual assault and murder, were considered more serious. In 2008, Canadian legislation changed to allow judges to begin ordering DNA to be collected from people found guilty of committing a wider range of less serious crimes, thereby expanding the list of crimes designated as secondary offences. Examples of secondary offences are failure to remain at the scene of an accident and drug offences. While usually less violent, secondary offences are sometimes the first crimes committed by people who later commit more harmful offences. As illustrated in Table 1 and 3, the NDDDB has become more effective as the number of DNA profiles it contains has increased, so a DNA profile entered into the COI following a conviction for failure to remain at the scene of an accident or failure to comply with a court order can actually help solve a subsequent murder committed by the same person.

Since 2008, convictions for drug offences alone have allowed 34,695 DNA profiles to be added to the NDDDB. To date, these profiles have resulted in 1,536 convicted offender hits that have helped with the investigation of 150 murders and 153 sexual assaults.



# PROCESS FOR REPORTING A DNA MATCH

## Criminal Investigations

NDDB processes biological samples from convicted offenders and enters the resulting DNA profiles in the Convicted Offenders Index.

Forensic laboratories process biological samples left at crime scenes and enter the resulting DNA profiles in the Crime Scene Index.

NDDB runs a search between the Crime Scene Index and the Convicted Offenders Index.

DNA match between a convicted offender's DNA profile and a crime scene DNA profile.

The offender, the crime scene and the laboratory identifiers are brought to the Canadian Police Services Information Centre (CPSIC).

CPSIC forwards the convicted offender data to the forensic laboratory.

Forensic laboratory passes the convicted offender identity information to the investigator.

# PROCESS FOR CONFIRMING A DNA MATCH

## Criminal Investigations

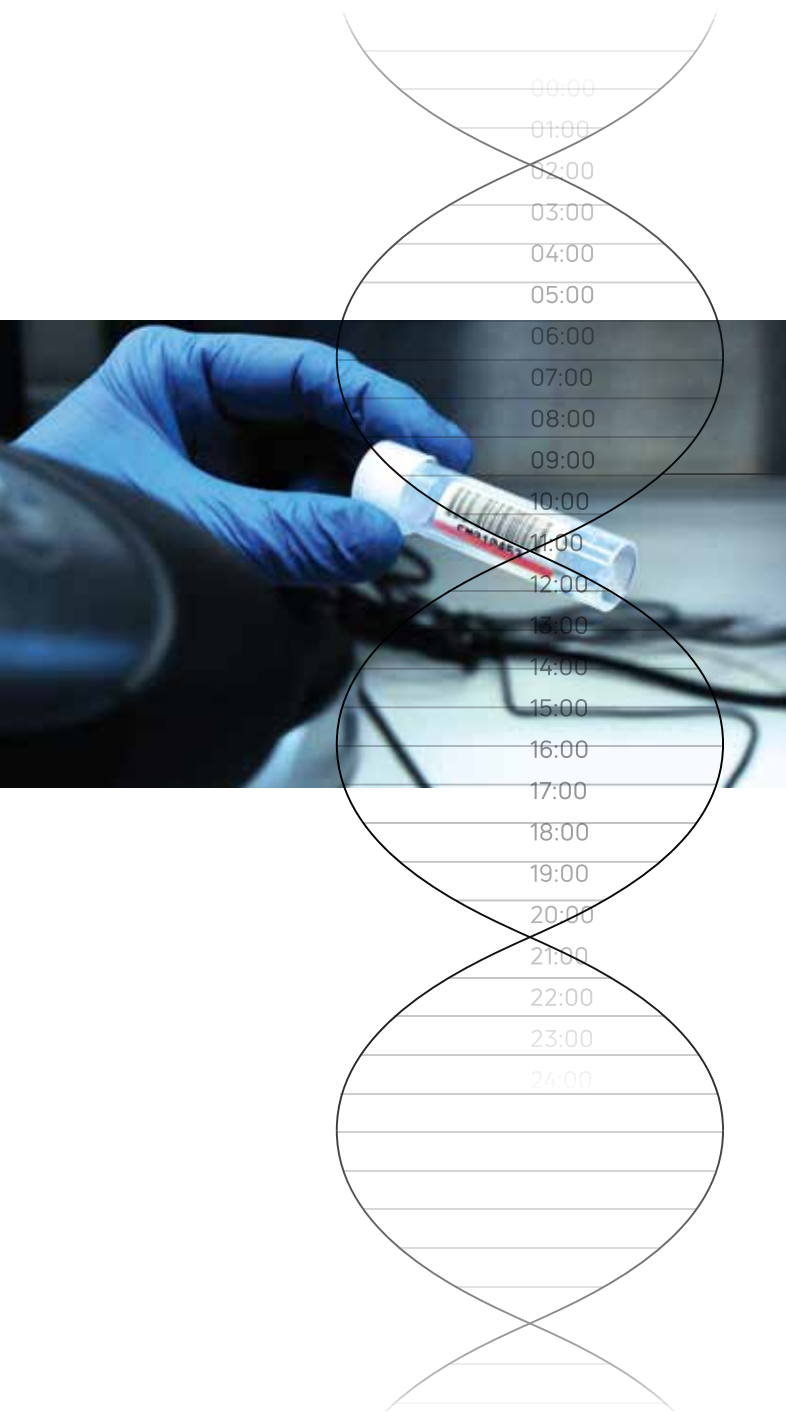
The investigator assesses the case evidence to determine if further investigation of the suspect is required.

If evidence of a match between the convicted offender and the crime scene DNA profiles is required for court purposes, the investigator must apply to a provincial court judge for a DNA warrant. If the DNA warrant is ordered, a biological sample can be collected from the suspect under that authority.

The biological sample is submitted to a forensic laboratory for analysis. The forensic laboratory compares the suspect's DNA profile to that of the crime scene evidence.

The forensic laboratory issues a report confirming a DNA match between the suspect's DNA profile and that of the crime scene evidence.

Based on the laboratory report and other investigative information, the investigator can consider whether charges should be laid or recommended against the suspect.



# HIGH IMPACT: ONE DAY IN THE NDDB

**F**or the past seventeen years, the NDDB has been processing Convicted Offender DNA samples and comparing them to Crime Scene DNA profiles generated by forensic laboratories across Canada. In order to understand how much investigative assistance is provided, consider what the Data Bank can do in just a single day.

***DNA evidence leads to a dangerous offender being arrested and charged quickly, possibly preventing subsequent assaults***

On January 7, 2016, a typical operating day for the NDDB, approximately 100 Crime Scene DNA profiles and 100 Convicted Offender DNA profiles were entered into the system. On the same day, NDDB staff identified 32 matches, 22 of which helped investigators resolve open cases. In seven of those cases, the DNA match identified a suspect who had not yet been developed by investigators. In half of these 22 cases, the DNA match gave the investigators sufficient grounds to obtain a DNA warrant, which made the warrant application easier and more likely to succeed. In six cases processed that day, the suspect entered a guilty plea within a year of the DNA match being made, which by legal standards, is a relatively short period of time. Clearly, information provided by the NDDB helps save time and resources for investigators and the criminal justice system.

In one third of the DNA matches processed on January 7, 2016, the Convicted Offender's DNA was found in the NDDB because he or she had already been convicted of committing a secondary designated offence, such as impaired driving or common assault. This demonstrates how important it is to obtain DNA collection orders whenever possible for secondary offence convictions. In other words, DNA collected for non-violent criminal convictions often helps solve more serious, violent crimes later on.

While the DNA profiles processed on January 7, 2016 provided assistance on many property crime investigations, just over half the files processed that day helped with the investigation of violent crimes such as murder, sexual assault and assault with a weapon. One of these files was a violent rape that occurred in the early morning hours on New Year's Day, 2016, in Newmarket, Ontario.

On January 1, 2016, in Newmarket, Ontario, a young woman was attacked while walking home along a pathway at 3am. A man who had been

following her knocked her to the ground and dragged her down an embankment where he sexually assaulted her causing internal injuries. The victim managed to escape when the attack was interrupted by a passerby. She ran to a nearby street, half naked and bleeding, and flagged down a vehicle for help. A sexual assault examination was performed in the hospital and samples were collected for DNA analysis. The DNA was vital to this investigation because her attacker's face had been partially obscured by clothing so the victim could not identify him. Due to the violent nature of the attack and the risk to public safety, the crime scene DNA analysis was prioritized. It was processed quickly by the Center of Forensic Sciences (CFS) and added to the NDDB's Crime Scene Index, then cross-referenced with the Convicted Offenders Index. It produced an immediate match. The assailant was identified as 37-year-old Kevin Wyatt. His DNA profile had been entered into the NDDB in 2005 when he was convicted of assault, a secondary designated offence. On January 8, 2016, just one week after he committed the Newmarket sexual assault, Wyatt was identified, arrested and charged. On January 9, 2017, he pled guilty to sexual assault.

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**"This case involved a large number of tips from the public, none of which initially led investigators in the direction of the accused. In just over a week's time, thanks to the CFS and the NDDB, we had quickly identified and arrested the individual responsible for this violent rape. The rapid turnaround time of the NDDB hit may have safeguarded future individuals from becoming victims. The value of the NDDB to criminal investigators is unparalleled."**

**Detective Simon James**

Major Crimes Bureau – Special Victims Unit  
York Regional Police



# SUCCESS STORIES

In Canada, no federal agency collects statistics on the exact number of criminal cases solved each year using DNA evidence. In fact, not all criminal investigations that involve DNA evidence rely on the NDDB. For example, if a DNA profile developed from blood found at a crime scene can be easily matched to a known suspect, then that case can be solved without the NDDB's assistance. Staff at the NDDB can only report on the number of times they assist investigations that rely on the Data Bank's indexes (see Table 4). However, positive feedback from investigators across the country demonstrates that the NDDB's services are extremely useful and profoundly appreciated. The following are a few of the stories highlighted last year by media sources and police agencies in which forensic laboratories and the NDDB played a significant role.



***A thief admits his guilt due to irrefutable DNA evidence, saving court resources and resolving the charges against him quickly***



On November 16, 2014, in Halifax, Nova Scotia, video footage revealed that a man smashed a window in a Mark's Work Wearhouse, broke into the store and stole several expensive winter jackets. As he fled, he dropped a few of the jackets, one of which was spattered with his blood. A DNA profile was developed from this blood sample. The next day, a Halifax pharmacy was robbed in a similar manner: a brick was thrown through a window, the thief grabbed lottery tickets and fled. Blood

droplets were found on the counter where the tickets had been and were used to develop a DNA profile. On November 21, Ronald Austin Dunbar, a known offender previously convicted for breaking and entering, was arrested by Halifax Regional Police on an unrelated matter. He was questioned about the pharmacy break-in but he denied being involved and was released due to lack of evidence. In January 2015, the DNA profiles from the blood collected at the Mark's Work Wearhouse and the pharmacy break-ins were added to the NDDB's Crime Scene Index. In both cases, the DNA profiles matched Dunbar. By February 13, 2016, he had been arrested and appeared in court, where he entered into a plea agreement for all offences.

**"The NDDB was a great asset to the investigation. Often times, investigators may have a suspect in mind but cannot link them to the crime. As in this case, without DNA and the match from the NDDB this break and enter may have gone unsolved. Instead, the NDDB was able to positively identify the accused and linked him to other break and enters as well. With the overwhelming DNA evidence, the accused pled guilty to multiple break and enters and, as a result, saved both court and police resources and ended a rash of break and enters in the Halifax Regional Municipality."**

**Sergeant Bobby Clyde**  
Halifax Regional Police

***DNA evidence proves more reliable than a confession, exonerating one suspect while convicting another***

On the evening of August 27, 2014, in Surrey, British Columbia, a nine-year-old girl walked into her bedroom to discover a man climbing in the window of her basement apartment. He was a drug addict, attempting a break-in, hoping to find something worth stealing. The man talked to the little girl, convinced her not to scream, then climbed back out of the window. Rather than alerting her mother, the little girl climbed out the window and followed the man. He was concerned about her being cold so he removed his jacket and used it to cover the child. She returned to her home a short time later and told her mother what happened. A DNA profile was developed from the window screen that the man had climbed through and from items found in the pocket of the jacket he had given the little girl. Local media publicized the story the very next day. Less than a week after the incident took place, a suspect was approached by the police. Due to mental illness, the suspect made self-incriminating statements, which led to his arrest. While this seemed like progress, the DNA profile developed from the crime scene evidence did not match this man so the charges against him were dropped – his confession had been false. The crime scene DNA profile matched Cory Schaumleffel, a known offender in the NDDB's Convicted Offenders Index. In October 2014, Schaumleffel was arrested and taken into custody by the Surrey RCMP. In September 2016, he pled guilty to the break and enter charge and was sentenced to six years in



prison. The judge took into account his extensive criminal record, which included multiple breaking and entering convictions over a fifteen year span.

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**“The success of the file was largely as a result of the suspect being identified through the DNA located on items he left behind and the point of entry. The DNA was also important in assisting investigators with eliminating the initial suspect. We rely heavily on NDDB results in many of our investigations.”**

**Sergeant Kerry Blades**

Investigator, Surrey Major Crime –  
Special Victims Unit  
Royal Canadian Mounted Police

## ***DNA leads a convicted offender to plead guilty to a break in and a cold-case sexual assault***

On the evening of June 12, 1993, in Varennes, Quebec, a 46-year-old woman came face-to-face with a knife-wielding male intruder in her home. Afraid for her own safety and for her young son who was asleep in his bedroom, she gave the man cash from her purse and, as a distraction, offered him a cigarette. After taking a couple of puffs, he left the cigarette in an ash tray. He then took her to her bedroom where he sexually assaulted her before escaping. The woman called the police who collected the cigarette butt and other crime scene evidence. The victim was taken to hospital where a sexual assault examination was conducted and biological samples were collected. In 1993, the NDDDB didn't exist and little could be done with DNA evidence if investigators had not already identified a suspect. The woman didn't recognize her attacker and there were no substantial leads, so the investigation eventually went cold. In 2014, the case was re-opened and the crime scene evidence was re-examined using DNA technology. Male DNA profiles generated from the victim and the cigarette butt were found

to be from the same man. This profile was added to the NDDDB's Crime Scene Index and cross referenced with the Convicted Offender Index where it matched a known convicted offender, Marcel Ménard. The investigators handling the 1993 cold-case contacted Ménard and he surrendered to police on July 14, 2016. Three months later, he pled guilty to breaking and entering, sexual assault and wearing a disguise. He was sentenced to five years in prison.

This was not the first time DNA from a crime scene matched Ménard's NDDDB profile. Six years earlier, in July 2010, the Montreal forensic laboratory processed a blood stain found at the scene of an unsolved 2009 break and enter in Montérégie, Quebec. When that crime scene DNA profile was added to the NDDDB, it was found to match Ménard. At the time of the offence, investigators were unable to identify a suspect and Sergeant Gilles Bouchard indicated that the break and enter would not have been solved without the DNA match. In June 2011, Ménard was arrested and pleaded guilty to one count of break and enter, for which he received a 20-month sentence.

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**"Once again, this investigation proves that DNA profiles play a decisive role in solving crimes because they can establish links between crimes and between suspects and crime scenes. In any case, it would have been impossible to solve this case 23 years after it happened without the support of science. In the words of the suspect himself, 'Our old demons are catching up with us.' "**

### **Patrick Trépanier, Investigator**

Intermunicipal Police Board  
Richelieu-Saint-Laurent  
Investigation and Support Division





***Technological advancements  
enable DNA evidence to speak  
for a young child***

On the evening of December 12, 2011, in Brandon, Manitoba, a five-year-old boy was abducted while playing with two other children. A car stopped on the street in front of his house and when the boy approached, he was pulled inside. After the car sped away, the other two children alerted the boy's father, who immediately called the police. Less than an hour later, police found the boy wandering in a nearby parking lot. They brought him home and questioned him but were unable to determine exactly what had happened. The boy was then taken to a hospital where a sexual assault examination was performed. Articles of the child's clothing were sent to a forensic laboratory to determine whether or not DNA could be found on them. A mixed DNA profile was found on the boy's clothing but in 2011, it was unsuitable to be entered into the NDDB's Crime Scene Index. Since there was not enough evidence to proceed further

with the case, the investigation was suspended. In 2015, technological advances led the NDDB to modify its criteria for accepting mixed-DNA profiles from crime scenes, which resulted in this sample meeting the criteria for acceptance. It was added to the CSI where it matched 38-year-old Hugh Alexander McCurry, a known convicted offender with a history of sexually inappropriate behaviour involving children. In 2001, his DNA profile was added to the Convicted Offenders Index when he was found guilty of indecent exposure, a secondary designated offence at the time. On the day he received notification of the DNA match, the Brandon investigator re-opened the case. A warrant to obtain McCurry's DNA was issued and executed within 12 days. When police interviewed him, McCurry admitted that he had sexually assaulted the boy, which could not have been proven otherwise. He was charged with abduction of a child under 14, sexual assault, sexual interference and invitation to sexual touching. McCurry pled guilty and was sentenced to seven years in prison.

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**"This investigation would have remained unsolved without the dedication of the RCMP Forensic Sciences and Identification Services personnel working towards advancing technology and embracing change to achieve the best results possible. Brandon and Western Manitoba has become a safer place for children with one less sexual predator in the community."**

**Cst. Robert Gale**

Brandon Police Service



***Suspect identified by substantial DNA evidence pleads guilty, saving court time and resources***

On the evening of June 2, 2014, in Edmonton, Alberta, three masked and armed men forced their way into a house where the owners, a middle-aged couple, were watching television. The wife managed to escape quickly, screaming for help once she got to the street, but her husband was trapped inside and was shot, sustaining a life-threatening injury. Two of the intruders fled in a car while the third escaped on foot. The homeowners were unable to identify the intruders because all three men had worn masks, but the police managed to recover pieces of a torn glove and a discarded shirt from the house and from the escape route the suspect took on foot. A single DNA profile was developed from the items and was added to the NDDB's Crime Scene Index where it produced a match with a known Convicted Offender. Steven Christopher Paul had entered the Data Bank in 2010 due to a previous conviction. In September 2014, he was arrested by Edmonton Police and charged with numerous offences including robbery with a firearm, break and enter with intent to commit an indictable offence and criminal negligence causing bodily harm. In the spring of 2016, upon learning that the prosecution had substantial DNA evidence against him, he pled guilty to seven charges and was sentenced to six years in prison. The other two men involved in this home invasion have, so far, not been caught.



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**"Without the DNA hit from the National DNA Data Bank, this investigation would likely have stalled and become far more protracted and costly by having to rely on alternative investigative techniques."**

**Detective Mark Anderson**

Patrol Support Team, CIS  
Northwest Division  
Edmonton Police Service



# NATIONAL DNA DATA BANK ADVISORY COMMITTEE

Established in 2000 under the mandate of the *DNA Identification Act*, the National DNA Data Bank Advisory Committee provides the NDDB with strategic guidance and direction on scientific advancements, matters of law, legislative changes, privacy issues and ethical practices. In addition, the Advisory Committee reports to the RCMP's Commissioner on matters related to the Data Bank's operations and advises the Commissioner on a range of issues related to DNA ethics, scientific advancements and legislative changes. The members of the Advisory Committee are appointed by the Minister of Public Safety Canada and collectively represent a diverse spectrum of expertise. The members of the Advisory Committee are listed on the right. For their complete biographies and more information about the Advisory Committee's role, please visit the NDDB National Advisory Committee website:

<http://www.rcmp-grc.gc.ca/dnaac-adncc/annurp-eng.htm>

**GARRY LOEPPKY O.O.M. (CHAIRPERSON)**

**PATRICIA KOSSEIM**

**DR. FREDERICK R. BIEBER**

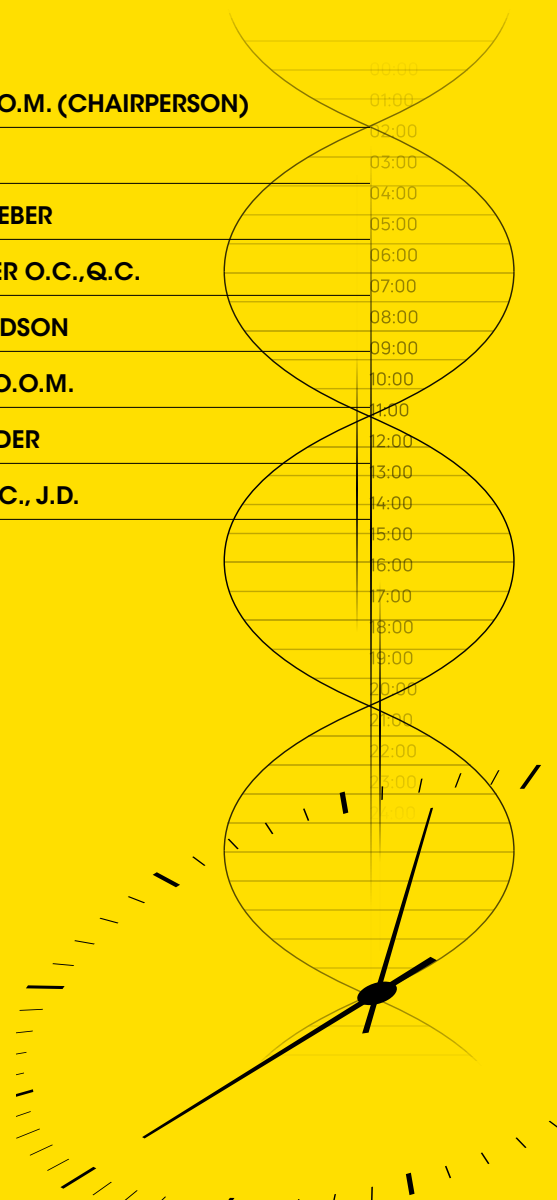
**GISÈLE CÔTÉ-HARPER O.C., Q.C.**

**DR. WILLIAM S. DAVIDSON**

**DR. RON FOURNEY O.O.M.**

**DR. ANJALI MAZUMDER**

**DERRILL PREVETT Q.C., J.D.**



# KEY STATISTICS

Biological samples: June 30, 2000  
through March 31, 2017

Endorsements: January 1<sup>st</sup>, 2008  
through March 31, 2017



**TABLE 1 – DNA Profiles Contained in the NDDB**

Convicted Offender Index	346,160
Crime Scene Index	130,100
<b>TOTAL</b>	<b>476,260</b>

Note: The NDDB receives 400–500 convicted offender samples per week.

## Biological Samples Received versus DNA Profiles Contained in the Convicted Offenders Index:

As of March 31, 2017, the NDDB had received 382,577 biological samples, of which 346,160 DNA profiles were contained in the Convicted Offenders

Index. The difference of 9.5 % can be attributed to rejected samples, duplicate samples, biological samples in the process of being treated and DNA profiles removed from the Convicted Offenders Index because of an absolute or conditional discharge, an expired retention period or because the conviction or order/authorization was quashed on appeal.

**TABLE 2 – Breakdown of DNA Profiles Contained in the Crime Scene Index**

Centre of Forensic Sciences	47,561
Laboratoire de sciences judiciaires et de médecine légale	39,233
RCMP National Forensic Laboratory Services	43,306
<b>TOTAL</b>	<b>130,100</b>

**TABLE 3 – Match Inventory Report**

Offender Hit	44,485
Forensic Hit	5,039
Offender Duplicate <sup>1</sup>	13,851
Identical DNA Profiles	301

<sup>1</sup> Does not include duplicate samples identified prior to laboratory analysis.

## EXPLANATORY NOTES

**Offender "hit":** A DNA profile developed from crime scene evidence and entered in the NDDB's Crime Scene Index matches a DNA profile in the Convicted Offenders Index.

**Forensic "hit":** A DNA profile developed from crime scene evidence and entered in the NDDB's Crime Scene Index matches another crime scene DNA profile in the Crime Scene Index.

**Offender Duplicate:** Cases where two biological samples from the same person were submitted to the NDDB.

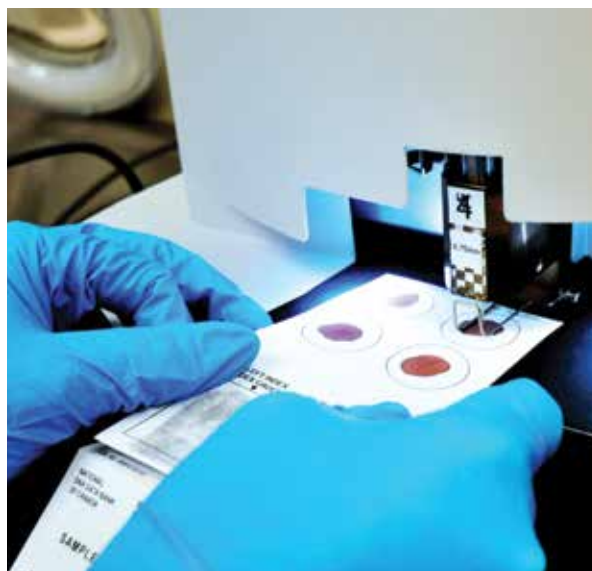
**Identical DNA Profiles:** DNA profiles of identical twins.

**Convicted Offender's Profile:** A DNA profile from an offender convicted of a designated offence (see Appendix).

**Crime Scene Profile:** A DNA profile developed from biological evidence found at a crime scene.

**TABLE 4 – Cases Assisted by the NDDB**

Break and Enters	12,882
Sexual Offences	5,108
Robberies	5,002
Assaults	3,456
Homicides	3,006
Attempted Murders	914
Other	14,117
<b>TOTAL</b>	<b>44,485</b>



**TABLE 5 –Convicted Offender Submissions Received – Breakdown by Category of Offence**

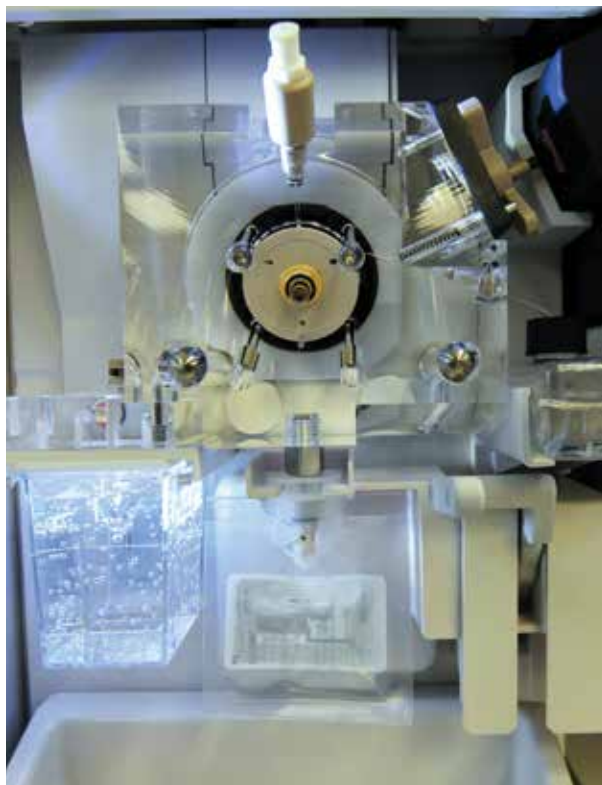
	Biological Samples	Endorsements
Primary	203,586	52,916
Secondary	175,744	68,444
Other	3,247	935
<b>TOTAL</b>	<b>382,577</b>	<b>122,295</b>

Note: The "Other" category includes samples submitted following conviction for a non-designated offence or without a DNA court order. These submissions are not processed unless the NDDb receives a corrected order.

**Primary and Secondary Offences:** See Appendix.

**TABLE 6 – Convicted Offender Submissions Received – Breakdown by Type of Offender**

	Biological Samples	Endorsements
Adult Offender	336,201	117,315
Young Offender	46,284	4,977
Military Offender	92	3
<b>TOTAL</b>	<b>382,577</b>	<b>122,295</b>

**TABLE 7 – Convicted Offender Submissions Received – Breakdown by Type of Offence**

	Biological Samples	Endorsements
Assaults	233,393	79,888
Sexual Offences	75,124	8,063
Break and Enters	55,113	25,020
Robberies	45,702	14,674
<i>Controlled Drugs and Substances Act</i>	34,695	11,535
Homicides	9,179	1,304
Other	47,921	27,696
<b>TOTAL</b>	<b>501,127</b>	<b>168,180</b>

Note: More than one offence may be associated with a sample submission



**TABLE 8 – Convicted Offender Submissions Received by Province/Territory**

	April 1, 2016 to March 31, 2017		June 30, 2000 to March 31, 2017	
	Biological Samples	Endorsements	Biological Samples	Endorsements (from Jan 1 <sup>st</sup> , 2008)
British Columbia	2,262	1,831	44,580	14,925
Alberta	2,369	2,019	40,985	12,904
Saskatchewan	905	441	16,236	2,465
Manitoba	1,528	1,024	23,397	6,478
Ontario	9,777	10,036	167,409	69,032
Quebec	4,090	1,715	63,729	12,155
New Brunswick	317	97	4,898	343
Nova Scotia	548	325	10,180	2,015
Prince Edward Island	71	16	997	69
Newfoundland & Labrador	268	129	5,391	803
Yukon	63	42	676	176
Northwest Territories	90	90	2,135	538
Nunavut	100	46	1,964	392
<b>TOTAL</b>	<b>22,388</b>	<b>17,811</b>	<b>382,577</b>	<b>122,295</b>

Note: The above information represents the convicted offender samples received and is not reflective of the number of convictions eligible for inclusion into the Convicted Offenders Index.

## REJECTION OF NDDB SUBMISSIONS

The NDDB has rejected only 5,670 (1.5 %) of the biological samples and 1,995 (1.6 %) of the endorsements it has received to date. Reasons for rejection include: the offender was convicted of a non-designated offence, the biological sample was inadequate, the collection kit used was inappropriate (sample), the offender's DNA profile was not contained in the COI (endorsement), or the DNA order was missing or invalid.

## COLLECTION OF ADDITIONAL BODILY SUBSTANCES

If a biological sample is rejected because the quality of the sample is deemed inadequate for DNA analysis, or if it was not submitted in accordance with the *DNA Identification Regulations*, an application for resampling can be authorized by a judge. Since June 30, 2000, the NDDB has received 1,213 samples taken under this provision.

**TABLE 9 – Breakdown of Biological Samples Destroyed and DNA Profiles Removed from the Convicted Offenders Index**

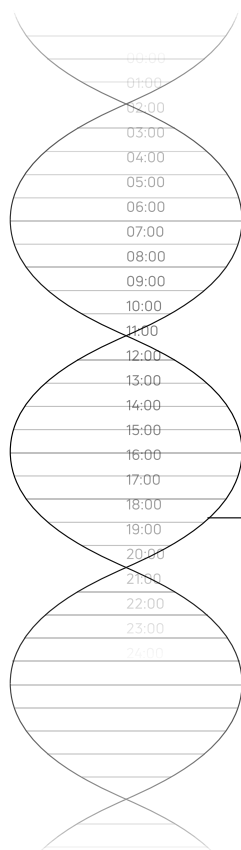
	Adult	Young Person
Conditional discharge	9,427	1,210
Conviction quashed on appeal	607	26
Absolute discharge	436	71
Duplicate sample (same order)	342	29
No suitable DNA profile obtained	106	17
Order/authorization quashed	33	8
Retention period expired	N/A	3,944
Other	64	10
<b>TOTAL</b>	<b>11,015</b>	<b>5,315</b>

N/A: Not applicable

**TABLE 10 – Summary of NDDB Indexes and Investigations Assisted**

	2012/13	2013/14	2014/15	2015/16	2016/17
Total Number of CSI DNA Profiles at Year-End	83,804	94,246	105,607	117,163	130,100
Increase in CSI DNA Profiles <sup>1</sup>	9,968	10,442	11,361	11,556	12,937
Total Number of COI DNA Profiles at Year-End	266,355	288,660	307,910	326,989	346,160
Increase in COI DNA Profiles <sup>1</sup>	24,171	22,305	19,250	19,079	19,171
Submissions received (biological samples and endorsements)	41,628	40,354	37,296	37,828	40,199
Investigations Assisted <sup>2</sup>	3,782	3,921	4,796	5,622	5,508

<sup>1</sup> Net increase after rejections and removals from indices<sup>2</sup> Combined Offender and Forensic Hits



# FINANCIAL STATEMENT\*

**April 1, 2016 – March 31, 2017**

<b>Expenditure Type</b>	<b>Expenditure (\$ thousands)</b>
Personnel	2,174
Internal Services	567
Employee Benefit Plan	499
Transport and Telecommunications	76
Development and Infrastructure Support	92
Rentals	3
Repair and Maintenance	3
Utilities, Materials, Supplies and Miscellaneous	974
Capital and Minor Equipment Purchases	456
<b>Sub-total</b>	<b>4,844</b>
Allocated Indirect Costs <sup>1</sup>	248
<b>Total</b>	<b>5,092</b>

<sup>1</sup> Indirect Costs include: Forensic Science and Identification Services administrative and corporate support, recruitment, the Quality Assurance Program, IT support and the National DNA Data Bank Advisory Committee.

\* The financial statement includes program development and training costs for the National Missing Persons DNA Program as it applies within the National DNA Data Bank.

# APPENDIX

## DEFINITIONS OF DESIGNATED OFFENCES

### PRIMARY COMPULSORY OFFENCES

This category includes offences for which the court is compelled to make a DNA order such as murder, manslaughter, aggravated sexual assault, sexual assault, child pornography and robbery. For a complete list of offences in this category, refer to paragraph (a) and (c.02) under the definition of "primary designated offences" in section 487.04 of the *Criminal Code*.

### PRESUMPTIVE PRIMARY OFFENCES

For these offences, the court shall make a DNA order unless the offender convinces the court that the impact of such an order on his/her privacy and security of the person is "grossly disproportionate" to the public interest in the protection of society and the proper administration of justice. Examples of offences included in this category are: breaking and entering a dwelling-house and hostage taking. For a complete list of offences in this category, refer to paragraphs (a.1) to (c.01) and (c.03) to (d) under the definition of "primary designated offence" in section 487.04 of the *Criminal Code*.

### LISTED SECONDARY OFFENCES

For these offences, the court may, on application by the prosecutor, make a DNA order if it is satisfied that it is in the best interests of the administration of justice to do so. Examples of offences in this category are: breaking and entering a place other than a dwelling-house, assault and indecent acts. For a complete list of offences

in this category, refer to paragraphs (c) and (d) and subparagraph (e)(ii) under the definition of "secondary designated offence" in section 487.04 of the *Criminal Code*.

### GENERIC SECONDARY OFFENCES

For these offences, the court may, on application by the prosecutor, make a DNA order if it is satisfied that it is in the best interests of the administration of justice to do so. All the other non-listed *Criminal Code* offences, including certain *Controlled Drugs and Substances Act* offences that are prosecuted by indictment for which the maximum punishment is imprisonment for five years or more, fall under this category of offences. Examples of offences in this category are: possession of explosive without lawful excuse, pointing a firearm, dangerous driving, dangerous driving causing bodily harm, causing death by criminal negligence, theft over \$5,000, and drug related offences (e.g. trafficking and possession for the purpose of trafficking, importing and exporting and production of substances) which fall under sections 5, 6 and 7 of the *Controlled Drugs and Substances Act*. For more information, refer to paragraphs (a) and (b) and subparagraph (e)(i) under the definition of "secondary designated offence" in section 487.04 of the *Criminal Code*.