

THE NATIONAL DDDDDDD DATA BANK OF CANADA

ANNUAL REPORT 2019/2020



Father/Père

Royal Canadian Gendarmerie royale Mounted Police du Canada

Mother/Mere

Canada

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THE NATIONAL DNA DATA BANK OF CANADA

Message From The COMMISSIONER, Royal Canadian Mounted Police

am pleased to present the 2019-2020 National DNA Data Bank (NDDB) annual report.

This year, the NDDB continued its important work of processing DNA samples to help identify suspects and victims, link crime scenes, and solve active cases. It was also instrumental in helping families obtain answers and find some closure in the wake of tragedies.

Following the devastating crashes of Air Ethiopia Flight 302 in March 2019 and

the Ukraine International Airlines Flight PS752 in January 2020, the NDDB helped identify the remains of the Canadian passengers. In a coordinated effort led by INTERPOL, the RCMP, including members of the NDDB team, worked with other international experts to identify the passengers by processing their personal belongings and biological reference samples from their families. Through a collaborative international effort, the victims of these terrible tragedies were identified, allowing the families to receive closure and cope with the loss of their loved ones.

The NDDB has been working diligently in partnership with the National Centre for Missing Persons and Unidentified Remains to assess, accept and process submissions for the new humanitarian indices (Missing Persons Index, Relatives of Missing Persons Index and Human Remains Index) introduced in 2018. Thanks to these efforts, the program has already received its first associations, identifying the remains of six individuals. As a result, police were able to notify the families that their loved ones were identified.



The Victim's Index also continues to help law enforcement identify victims in criminal investigations and bring offenders to justice.

This year, important legislative amendments affected the NDDB. Bill C-75, *An Act to amend the Criminal Code, the Youth Criminal Justice Act and other Acts and to make consequential amendments to other Acts,* received Royal Assent in the spring of 2019, changing the category of 70 offences to listed secondary offences.

In addition, the coming into force in late 2018 of the *Cannabis Act* and the amendments to the *Criminal Code* regarding transportation offences, including impaired driving, have added new offences to the list of designated offences that qualify for DNA sample processing. These legislative changes allow the NDDB to keep fulfilling its mandate of supporting police investigations and solving crimes.

As the NDDB enters its 20th year of operation in June 2020, we will continue to modernize operations, forge new partnerships, and enhance the services we provide to remain responsive to an evolving crime environment. Our dedicated professionals at the NDDB are well-equipped to handle the ever-changing needs and requirements for DNA profile processing and matching. Their efforts will continue to help keep Canadians safe, and provide victims and their families with the closure they deserve.

Brenda Lucki Commissioner

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Quick FACTS

Convicted Offender Samples Received in 2019/20 ¹	19,465
	111.14
Increase in the Crime Scene Index in 2019/20	13,844
Offender Hits (Convicted Offender to Crime Scene) in 2019/20	6,202
	10 00
Forensic Hits (Crime Scene to Crime Scene) in 2019/20	655
Associations made by the NDDB in 2019/20 (Offender and Forensic Hits)	6,857
e de la fille de la fille	
Associations made by the NDDB since June 30, 2000 (Offender and Forensic Hits)	69,423
¹ 2019/20 refers to the NDDB's fiscal year from April 1, 2019 through March 31, 2020	

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THE NATIONAL DNA DATA BANK

he NDDB is a centralized collection of hundreds of thousands of DNA profiles that helps investigators across the country solve a range of crimes. The main goals are simple:

- link crime scenes across jurisdictional lines;
- help identify or eliminate suspects;
- determine whether a serial offender has been involved in certain crimes; and
- assist investigators, coroners and medical examiners to find missing persons and identify human remains.

The NDDB was created by an act of Parliament on June 30, 2000. At that time, DNA analysis was a relatively new procedure. Since then, it has become a key component of most investigations, saving time and money by helping to focus investigations.

On behalf of the Government of Canada, the RCMP is the steward of the NDDB, which operates for the benefit of Canada's entire law enforcement community.

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Since the creation of the National Missing Persons DNA Program, the NDDB has reported six DNA associations that have assisted in the identification of unidentified human remains.

The NDDB maintains the following indices:

- Convicted Offenders Index (COI)
- Crime Scene Index (CSI)
- Victims Index (VI)
- Voluntary Donors Index (VDI)
- Missing Persons Index (MPI)
- Relatives of Missing Persons Index (RMI)
- Human Remains Index (HRI)

The COI, CSI, VI and VDI provide assistance to criminal investigations as follows:

- Comparing DNA profiles found at crime scenes against the DNA profiles of convicted offenders (CSI to COI). When a match is made, it can help identify a suspect. An "offender hit" is the term used to describe this type of DNA match. If no match is made, that information can also help eliminate suspects.
- Comparing DNA profiles 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 identified. This determines whether a serial offender is involved in a number of cases. A "forensic hit" is the term used to describe this type of DNA match.
- Comparing DNA profiles contained in the VI and the VDI. This helps to identify unknown victims, link crime scenes together through victim and voluntary donor DNA profiles, or eliminate the voluntary donors from the focus of an investigation. The VDI can also be used for elimination purposes in humanitarian investigations.

As part of the National Missing Persons DNA Program, the NDDB maintains the MPI, RMI and HRI to support humanitarian investigations at the national level. These indices allow DNA profiles developed from biological samples and other items collected and submitted by police, coroners and medical examiners to be compared to other DNA profiles in the NDDB. The DNA profiles in the RMI are only compared to those in the MPI and the HRI.

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OFFENDER AND FORENSIC HITS

When the NDDB first began operating in 2000, it contained relatively few DNA profiles. As more DNA profiles are added to the NDDB over the years, a greater number of matches are made in less time.



*An offender hit is a match between DNA found at a crime scene and DNA of a convicted offender. *A forensic hit is a match of DNA profiles found at separate crime scenes.

CONVICTED OFFENDER SUBMISSIONS

Every year, the NDDB processes approximately 40,000 convicted offender submissions consisting of:

- biological samples (used to generate DNA profiles that are entered into the Convicted Offenders Index (COI)); or
- Endorsement submissions (fingerprints and documentation for convicted offenders whose DNA profiles are already in the COI).

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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 only of fingerprints and documentation. The endorsement process ensures that a convicted offender's DNA profile remains in the NDDB if the endorsement is received prior to:

- the conviction for which the original DNA order was made being quashed on appeal;
- the original DNA order/authorization being quashed on appeal; or
- the retention period expiring because the person was either:
 - convicted as a young person; or
 - previously discharged under Section 730 of the *Criminal Code* of a designated offence. (Note: this condition was removed as of March 6, 2018 when amendments to the *DNA Identification Act* came into force).

When the NDDB receives either a biological sample or an endorsement submission, the documentation is reviewed to ensure two things: first, that the DNA order was issued for a criminal offence for which DNA can legally be collected and second, that the offender's personal information required for the submission is complete and accurate.

All convicted offender submissions are recorded in the NDDB's internal tracking system without any of the offender's personal information. Documentation for both convicted offender biological sample and endorsement submissions is sent to the RCMP's Canadian Criminal Real Time Identification Services so it can be certified; associated with an individual by fingerprint comparison; and recorded in the individual's criminal record.





PROCESSING OF BIOLOGICAL SAMPLES

Convicted Offender Samples

When someone is found guilty of committing a designated offence for which a biological sample can be obtained, the judge can issue a DNA order. A trained peace officer will then collect a biological sample from that person by taking a blood, buccal or hair sample. The NDDB is responsible for processing all convicted offender biological samples and entering the DNA profiles derived from these samples into the Convicted Offenders Index (COI).

Kits designed specifically for the NDDB are used for collecting biological samples from offenders. There are three types of kits available:

- 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

Although 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.

Crime Scene and Victim Samples

Crime scene DNA evidence is collected by police investigators and examined by forensic laboratories across Canada to generate DNA profiles. Only a DNA profile derived from a designated offence can be added to the NDDB's Crime Scene Index (CSI) or the Victims Index (VI). The NDDB is also responsible for removing victims' DNA profiles in accordance with the *DNA Identification Act*. The following public forensic laboratories are authorized to add DNA profiles to the CSI and VI:

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

Voluntary Donor Samples

Samples collected from voluntary donors during the course of a criminal investigation of a designated offence are processed by a public forensic laboratory. If the resulting profile provides a potential benefit to the investigation, it is added to the NDDB's Voluntary Donors Index (VDI). Voluntary donor samples collected as part of a humanitarian investigation are provided to the NDDB for processing and added to the VDI. The NDDB is responsible for removing voluntary donors' DNA profiles in accordance with the *DNA Identification Act*.

Missing Persons, Relatives of Missing Persons or Human Remains Samples

Processing of samples from missing persons, relatives of missing persons and found human remains falls within the National Missing Persons DNA Program (NMPDP). This program is a partnership between the National Centre for Missing Persons and Unidentified Remains (NCMPUR) and the NDDB. The role of NCMPUR is to act as a single point of contact for investigators. As such, NCMPUR authorizes the submissions to the NDDB for missing persons and human remains investigations.

Under the *DNA Identification Act*, the NDDB is responsible for maintaining the humanitarian indices and also for:

- receiving biological samples from submitting agencies and developing DNA profiles;
- receiving DNA profiles from approved laboratories for technical review;
- interpreting and comparing DNA profiles from human remains, relatives of missing persons and personal belongings from missing persons;
- adding and removing DNA profiles in the Human Remains Index, Relatives of Missing Persons Index and Missing Persons Index in accordance with the legislation;
- issuing and explaining kinship and identity association reports; and
- providing scientific advice and support to NCMPUR and investigators, as required.

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OVERVIEW OF NMPDP SUBMISSION PROCESS



COMPARING DNA PROFILES

The DNA profiles in the NDDB are compared using the Combined DNA Index System (CODIS), which is a secure network and software program developed by the FBI and the US Department of Justice, and provided to the RCMP for use by the NDDB. CODIS has become an internationally accepted tool for many forensic laboratories, allowing DNA profile information to be compared using a standard, secure format. In Canada, the NDDB uses CODIS for daily comparisons of DNA profiles. Each new DNA profile entered into one of the NDDB's DNA indices is automatically compared against all existing profiles contained in other DNA indices as permitted by the *DNA Identification Act*.

INTERNATIONAL PARTICIPATION

The NDDB shares DNA information with international investigating authorities through an international DNA Information Sharing Agreement with INTERPOL. This agreement is approved by the Government of Canada and is limited to investigations and prosecutions of designated offences or investigations involving missing persons and unidentified human remains.

Since the first international agreement was signed in 2002, the NDDB has received 1830 incoming international requests related to criminal investigations to search the Convicted Offenders Index, the Crime Scene Index, the Missing Persons Index and the Human Remains Index. These searches produced 6 offender hits and 10 forensic hits. Furthermore, the NDDB has sent 329 requests related to criminal investigations to other INTERPOL countries for comparison of DNA profiles developed from crime scene samples, resulting in 8 offender hits and 2 forensic hits.

In 2018, the agreement was updated to allow

international comparisons of DNA profiles from

missing persons and unidentified human remains.

Since then, the NDDB has received 51 incoming

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international requests to search missing persons and human remains profiles against the Convicted Offenders Index, the Crime Scene Index, the Missing Persons Index and the Human Remains Index. The NDDB has sent 13 requests to other INTERPOL countries for comparison of DNA profiles developed from missing persons and human remains. To date, none of these searches have resulted in an association.

PRIVACY OF INFORMATION

The DNA Identification Act specifies that DNA profiles in the NDDB's indices can only be used for law enforcement purposes or humanitarian purposes, through the National Missing Persons DNA Program. The Act also clearly states that the DNA profiles in the Relatives of Missing Persons Index can only be compared to DNA profiles in the Missing Persons Index and Human Remains Index.

As an additional safeguard, when a convicted offender's DNA sample arrives at the NDDB, the donor's identity is separated from his or her genetic information, and the sample is identified by a numeric bar code. These bar codes are the only link connecting personal information, the biological sample and the DNA profile. The donor's personal information is kept in a separate registry maintained by the RCMP's Canadian Criminal Real Time Identification Services (CCRTIS), which NDDB staff cannot access. This process ensures that NDDB staff never know which convicted offender's DNA profile they are processing. Likewise, CCRTIS staff do not have access to the genetic information of an offender. With the exception of biological sex, DNA profiles held within the indices of the NDDB do not reveal any medical or physical information about the donor.

The Act further protects Canadians' privacy rights by requiring informed consent for submissions to the Relatives of Missing Persons Index, the Victims Index and the Voluntary Donors Index. This consent can be withdrawn at any time by the contributor. In addition, at least once every five years, the investigating agency will be contacted about the case to ensure that the person from whom the DNA profile was obtained has not withdrawn their consent. Investigators are also asked whether they believe the DNA profile will continue to assist in the investigation for which it was obtained. If removal is requested or if the investigating agency fails to respond then the DNA profile will be removed from the appropriate DNA index and the biological sample will be destroyed.

Lastly, the NDDB will only share DNA information with other investigative authorities as permitted by legislation.

THE VALUE OF SECONDARY DESIGNATED OFFENCE SUBMISSIONS

DNA samples for the Convicted Offenders Index can only be collected from individuals found guilty of committing crimes legislated and categorized by the *Criminal Code* as primary or secondary designated offences. When the NDDB first started its operations in 2000, the number of secondary designated offences was limited. In 2008, the *Criminal Code* was changed and the list of secondary designated offences was expanded to include a wider range of less serious crimes (e.g., failure to appear and drug offences). While usually less violent, these offences can help solve more serious criminal offences.

To illustrate the value of these offences, offender hit data was selected from the NDDB for a few common secondary designated offences. The figure below provides the number of offender hits to ongoing investigations (including murders and sexual assaults) that were the outcome of DNA orders being issued for offenders convicted of secondary designated offences.



¹ Associations refers to the number of Offender Hits.

PROCESS FOR REPORTING A DNA MATCH

Criminal Investigations

NDDB processes biological samples from convicted offenders and enters the resulting DNA profiles into the Convicted Offenders Index. Forensic laboratories process biological samples left at the crime scenes and enter the resulting DNA profiles into 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 Criminal Real Time Identification Services (CCRTIS).

CCRTIS 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.

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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 considers whether charges should be laid or recommended against the suspect.

Success STORIES

he NDDB provides vital information to police investigations. Samples processed from crime scenes can either link or exclude a suspect. DNA evidence from different crime scenes is compared to assess whether the same suspect is linked to multiple offences and whether the crimes took place at the local level, domestically, or internationally.

The following are true stories that highlight just some cases where DNA has been instrumental in shaping the course of the investigation.

UNINVITED GUEST

n the spring of 2018 in Regina, Saskatchewan, a homeowner in his mid-sixties was standing in his open garage while talking on his mobile phone. An unknown male walked right past him into the garage, opened the fridge, grabbed a 2L bottle of iced tea, drank from it, and put it back in the fridge.

When the homeowner approached the intruder and asked what he was doing, the intruder punched him in the face, breaking his nose. The intruder then stole the homeowner's phone and fled on foot.

No useful fingerprints were found on the iced tea bottle but a swab was taken of the mouth area. The swab was sent for DNA analysis to the RCMP National Forensic Laboratory Services and an unknown male profile was developed from the evidence. In July, when the profile was added to the crime scene index of the NDDB, it resulted in a hit to a known convicted offender.

After obtaining a DNA warrant to confirm the match, the suspect was arrested and charged with assault. He was convicted of assault causing bodily harm and given 388 days in jail and probation for 12 months.

Other than the victim, this file had no witnesses or leads and was concluded as unsolved pending the DNA analysis. If it wasn't for the NDDB, this file may have remained unsolved and the offender would have escaped justice for this violent offence.

⁴⁴I have been in the Forensic Identification Unit for 5 years now and I have too many files to count the successes that we have had through DNA analysis from the National Forensic Laboratory Services and the assistance of the NDDB, from stolen autos to homicides. ¹¹

> Detective Cst J.Kress Forensic Identification Unit Regina Police Service

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⁴⁴The National DNA Data Bank was vital in this investigation. We had exhausted all avenues of ground investigation, but it was the data bank that identified and named a suspect through DNA evidence. The suspect was located, arrested, charged, and later convicted for sexual interference on a minor. ⁹⁹

Cst. Danny Earle

Liaison Intelligence Officer Happy Valley- Goose Bay, RCMP

III-IIII-III

CAN'T FOOL DNA

n August 2017, the RCMP in Happy Valley – Goose Bay, Newfoundland and Labrador, received a call from a parent that their child (a minor) had been sexually assaulted.

The victim, although initially scared and reluctant to speak to police, bravely gave a statement, agreed to a hospital examination, and completed a sexual assault examination kit. The victim's clothing was taken as evidence and sent for DNA testing as well.

The RCMP continued their investigation while waiting for the DNA results. The investigator also spoke with an individual living in the area about a possible suspect, however it was determined that the suspect had since left the area.

> While the investigator was busy tracking down this lead, the laboratory was processing DNA found on the victim's clothing and comparing it to DNA profiles in the NDDB.

The NDDB got a match. Despite the direction in which the investigation had been led, the match was not to the out of town suspect but rather to the individual who had given the investigator misleading information!

In early February 2018, the suspect was arrested and taken into custody for sexual assault and sexual interference and was later convicted in 2019. It is worth noting that the offender matched the description provided by the victim in her statement.

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VIOLENT ATTACKER CAUGHT BY CANDY

n January 2018, the Montreal police service was on alert for a sexual predator after two violent attacks in the city. The attacks took place within weeks of each other and the degree of violence was escalating. The investigators had no suspects and their hopes rested on DNA.

The first assault happened in December 2017. A man followed a young woman, grabbed her from behind and threatened her with a knife to her throat. While trying to escape, the victim was stabbed in the neck but managed to flee. After evaluating the scene, investigators believed that the suspect might have been waiting for his victim in a nearby bus shelter and followed her from there. They collected items from the victim's clothing and the bus shelter and submitted them for DNA analysis to the Laboratoire de sciences judiciaires et de médecine légale (LSJML) in Montréal. The laboratory obtained three different male profiles from the bus shelter evidence:

- one from a candy;
- one from a tissue paper; and
- one from a cigarette butt.

LSJML submitted all three profiles to the National DNA Data Bank for comparison with profiles contained in the Convicted Offenders Index. The DNA profile obtained from the candy resulted in a match to a convicted offender. Unfortunately, the investigators found no other evidence to link that potential suspect to the attack.

In January 2018, a second victim was attacked from behind, punched repeatedly in the face, and strangled. While the suspect tried to undress the victim, her screams alerted neighbours and their shouts drove the suspect away. The victim was badly injured and her clothing was submitted for DNA analysis. Given the urgent need to identify the suspect to prevent further assaults, the LSJML activated its emergency protocol to get DNA results from the evidence within 24 hours. ⁴⁴All it takes is a tiny, carefully collected sample following a complete, thorough examination of the crime scene for the NDDB to prove its effectiveness in supporting charges against a violent sexual predator identified through DNA.⁷⁷

Mélanie Martineau Sergent détective- Équipe de surveillance des délinquants sexuels Service de police de la Ville de Montréal

Using new software technology that greatly assists in the interpretation of DNA mixtures, the laboratory was able to link the male DNA profile from the candy in the first assault to a mixed DNA profile obtained from the coat of the victim in the second assault. The association between the two profiles was a critical element linking the suspect to the two assaults.

With the new evidence from the second assault, police arrested the suspect. There is no doubt that the information provided by the DNA match to a convicted offender was crucial in helping this investigation. The offender pled guilty, was sentenced to seven years in prison and was declared a dangerous offender in the summer of 2019.

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NATIONAL MISSING PERSONS DNA PROGRAM'S FIRST MATCH

n October 2017, a cyclist found a man deceased in a tent at a homeless encampment along Nose Creek Pathway in Calgary.

The medical investigator determined the death was not suspicious and that the man had been in the tent between five and six months. The man was 5'4" tall, and somewhere between 25 and 50 years old. Because of how long he had been deceased, he could not be identified through traditional methods such as fingerprinting. The only items the man had on him were a heavily damaged cell phone and SIM card. Some emails stored on the damaged phone were recovered, and seemed to indicate that the phone probably belonged to the man found in the tent. While officers worked on piecing together the identity of the deceased, a DNA sample from the body was sent for processing. Due to the condition of the remains, three different samples had to be sent for analysis to a private laboratory before a suitable DNA profile could be developed. This process took about one year.

Once a suitable profile was developed, it was submitted to the National DNA Data Bank.

In October 2019, a DNA match came back with a name that matched the name used in the emails found on the phone with the deceased. This confirmed that the phone belonged to the man who had been found in the tent. He was originally from eastern Canada and had not been reported missing.

This was the first time DNA submitted to the National Missing Person DNA Program had been successfully used to identify human remains in Canada. As a result, police were able to notify the man's estranged family of his death, and the circumstances around it.

"This case illustrates the value of the National Missing Persons DNA Program in assisting missing persons and unidentified remains investigations. It can provide closure to families and link cases that span provinces and jurisdictions. The more profiles we get, the greater our chances of making an identification and bringing more people home. "

> Kathy Murphy Former Manager, National DNA Data Bank Missing Persons Unit

⁴⁴This was someone's son, someone's brother. Even though his death wasn't criminal in nature, it was extremely important to the investigators that we identified him so that we could let his family know what happened to him. ⁹⁹

> Staff Sgt. Martin Schiavetta Calgary Police Service Missing Persons Unit.

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(2) [Abrogé, 2007, ch. 22, art. 7.]

Abrogation proposée - 487.03

487.03 [Abrogé, 2019, ch. 25, art. 196. Entrée en vigueur le 19 septembre 2019.] 1993, ch. 40, art. 15; 1995, ch. 27, art. 1; 2000, ch. 10, art. 13; 2007, ch. 22, art. 7; 2008, ch. 18, art. 12

Analyse génétique effectuée à des fins médicolégales

487.04 Définitions - Les définitions qui suivent s'appliquent au présent article et aux articles 487.05 à 487.0911.

ADN - Acide désoxyribonucléique

* adolescent * S'entend, selon le cas, au sens du puragraphe 2(1) de la Loi nor le système de justice permitte pour les adolescents ou du paragraphe 2(1) he ha has not her pranty conservationer (+ some

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(2) [Repealed 2007, c. 22, s. 7.] Proposed Repeal - 487.03

487.03 [Repealed 2019, c. 25, s. 196, In 2007 c 22 2007 c 22 2000 2007, c. 22, s. 7; 2008, c.

Forensic DNA Analysis

487.04 Definitions - In this section and in

"adult" has the meaning assigned by su 2(1) of the Youth Criminal Justice Ace

"designated offence" means a nated offered or a necessitary de

-TANK A." MARALES MARANE

NATIONAL DNA DATA **BANK ADVISORY** COMMITTEE

stablished in 2000 under the mandate of the DNA Identification Act, the NDDB 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 NDDB 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 and Emergency Preparedness

and collectively represent a diverse spectrum of expertise. The current members of the Advisory Committee are:

BRENDAN HEFFERNAN (CHAIRPERSON) DR. FREDERICK R. BIEBER, PH. D. DR. RON FOURNEY, PH. D., O.O.M. DERRILL PREVETT, Q.C. SUE O'SULLIVAN, B.A., O.O.M. DR. MICHAEL SZEGO, PH. D., MHSC. DR. BEN KOOP. PH. D. LACEY BATALOV KASIA KRZYMIEN (APR 2018 TO JUL 2019)

For their complete biographies and more information about the Advisory Committee's role, please visit the NDDB Advisory Committee website: http://www.rcmp-grc.gc.ca/dnaac-adncc/index-eng.htm

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Discussions d'ordre se

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(1.3) article 153 (c

Key STATISTICS



Biological samples: June 30, 2000 through March 31, 2020 Endorsements: January 1, 2008 through March 31, 2020

TABLE 1 - DNA Profiles Contained in the NDDB		
Convicted Offenders Index (COI)	401,546	
Crime Scene Index (CSI)	173,292	
Victims Index (VI)	41	
Voluntary Donors Index (VDI)	0	
Missing Persons Index (MPI)	68	
Relatives of Missing Persons Index (RMI)	562	
Human Remains Index (HRI)	173	
TOTAL	575,682	

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, 2020, the NDDB had received 444,931 biological samples, of which 401,546 DNA profiles were contained in the COI. The difference of 9.8 % can be attributed to rejected samples, duplicate samples, biological samples in the process of being analyzed and DNA profiles removed from the COI because of an absolute or conditional discharge, expired retention period, or because the conviction or the DNA order/authorization was quashed on appeal.

TABLE 2 - Breakdown of DNA Profiles Containedin the Crime Scene Index		
Centre of Forensic Sciences	66,650	
Laboratoire de sciences judiciaires et de médecine légale	47,168	
RCMP National Forensic Laboratory Services	59,474	
TOTAL	173,292	

TABLE 3 – Match Inventory Report	
Offender Hit	62,568
Forensic Hit	6,855
Victim Hit	5
Offender Duplicate ¹	14,655
Identical DNA Profiles	371

¹Does not include duplicate samples identified prior to laboratory analysis.

EXPLANATORY NOTES

Offender "hit": A DNA profile developed from crime scene evidence and entered into the NDDB's CSI matches a DNA profile in the COI.

Forensic "hit": A DNA profile developed from crime scene evidence and entered into the NDDB's CSI matches another crime scene DNA profile in the CSI.

Victim "hit": A DNA profile developed from a victim and entered into the NDDB's VI matches a DNA profile in another 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.

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

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TABLE 4 - Offender Hits by Case Type	
Break and Enters	28,287
Robberies	6,773
Sexual Offences	6,578
Assaults	4,864
Homicides	4,028
Attempted Murders	1,196
Other	10,842
TOTAL	62,568

TABLE 5 – Convicted Offender Submissions Received – Breakdown by Category of Offence			
	Biological Samples	Endorsements	
Primary	234,700	76,292	
Secondary	206,552	99,267	
Other	3,679	1,121	
TOTAL	444,931	176,680	

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 section 487.04 of Criminal Code of Canada.

TABLE 6 – Convicted Offender Submissions Received – Breakdown by Type of Offender			
	Biological Samples Endorsements		
Adult Offender	391,447	170,043	
Young Offender	53,377	6,629	
Military Offender	107	8	
TOTAL	444,931	176,680	

TABLE 7 – Convicted Offender Submissions Received – Breakdown by Type of Offence			
	Biological Samples	Endorsements	
Assaults	270,980	115,331	
Sexual Offences	92,261	12,439	
Break and Enters	62,885	35,811	
Robberies	51,153	20,106	
Controlled Drugs and Substances Act and Cannabis Act	41,636	16,516	
Homicides	10,115	2,077	
Other	67,265	52,360	
TOTAL	596,295	254,640	

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

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TABLE 8 – Convicted Offender Submissions Received by Province/Territory						
	April 1, 2019 20	to March 31, 20	June 30, 2000 to March 31, 2020			
	Biological Samples	Endorsements	Biological Samples	Endorsements (from Jan 1 st , 2008)		
British Columbia	1,647	1,392	50,419	19,899		
Alberta	2,112	1,599	47,750	18,241		
Saskatchewan	804	494	18,823	3,921		
Manitoba	1,077	1,088	27,276	9,879		
Ontario	9,216	11,130	195,541	101,131		
Quebec	3,383	1,598	75,061	17,153		
New Brunswick	299	123	5,709	651		
Nova Scotia	445	257	11,481	2,792		
Prince Edward Island	40	18	1,192	117		
Newfoundland & Labrador	231	135	6,202	1,306		
Yukon	44	18	808	236		
Northwest Territories	75	83	2,399	792		
Nunavut	92	47	2,270	562		
TOTAL	19,465 17,982 444,931 176,					

NOTE: The above information represents the convicted offender submissions received and is not reflective of the number of convictions eligible for a DNA order.

RETROACTIVE AUTHORIZATIONS

This is a biological sample taken from an offender who was found guilty of certain designated *Criminal Code* offences before June 30, 2000. The authorization is granted as per qualifying criteria set out in s.487.055 of the *Criminal Code*. Under this provision, the NDDB has received 5,035 submissions.

REJECTION OF NDDB SUBMISSIONS

The NDDB has rejected only 6,743 (1.5 %) of the biological samples and 2,623 (1.5 %) 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 1,728 samples taken under this provision.



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

	ADULT	YOUNG PERSON
Conditional discharge (repealed for adults as of March 6, 2018)	11,147	1,649
Conviction quashed on appeal	750	30
Absolute discharge (repealed for adults as of March 6, 2018)	570	103
Duplicate sample (same order)	365	32
No suitable DNA profile obtained	131	19
Order/authorization quashed	43	8
Retention period expired	N/A	6,885
Other	72	11
TOTAL	13,078	8,737

N/A: Not applicable

TABLE 10 – Summary of NDDB Indices and Associations Made					
	2015/16	2016/17	2017/18	2018/19	2019/20
Total Number of CSI DNA Profiles at Year-End	117,163	130,100	143,963	159,448	173,292
Increase in CSI DNA Profiles ¹	11,556	12,937	13,863	15,485	13,844
Total Number of COI DNA Profiles at Year-End	326,989	346,160	365,565	384,488	401,546
Increase in COI DNA Profiles ¹	19,079	19,171	19,405	18,923	17,058
Submissions received (biological samples and endorsements)	37,828	40,199	40,394	38,898	37,447
Associations made (Offender and Forensic Hits)	5,622	5,508	5,751	7,291	6,857

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 $^{\rm 1}$ Net increase after rejections and removals from indices.

Financial STATEMENT¹

April 1, 2019 – March 31, 2020	
Expenditure Type	Expenditure (\$ thousands)
Personnel	2,416
Internal Services	760
Employee Benefit Plan	1,250
Transport and Telecommunications	47
Development and Infrastructure Support	37
Rentals	163
Repair and Maintenance	6
Utilities, Materials, Supplies and Miscellaneous	1,134
Capital and Minor Equipment Purchases	75
Sub-total	5,888
Allocated Indirect Costs ²	214
TOTAL	6,102

¹ The financial statement includes cost for the National Missing Persons DNA Program as it applies within the National DNA Data Bank.

² 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.



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