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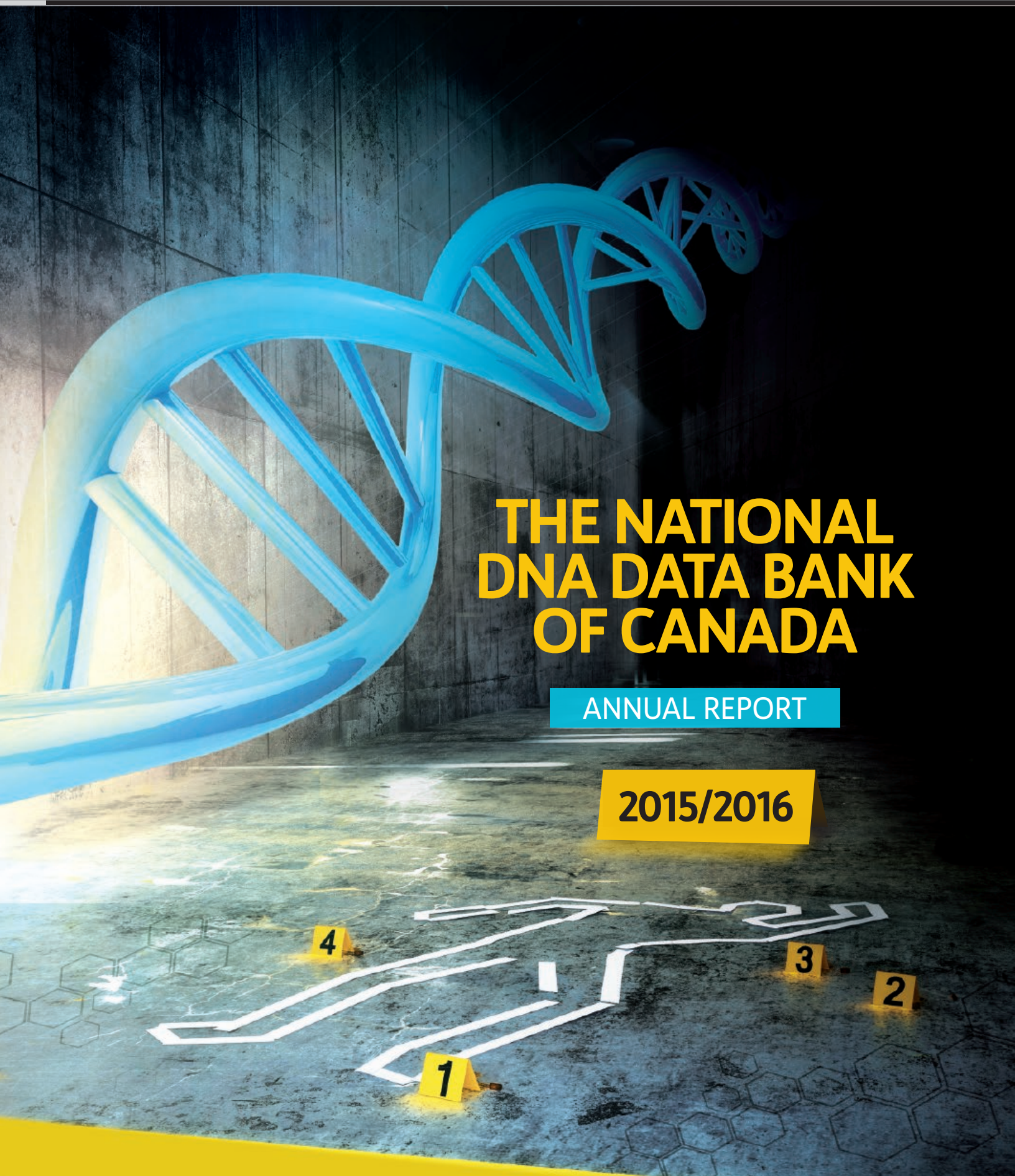
ROYAL CANADIAN MOUNTED POLICE • GENDARMERIE ROYALE DU CANADA



THE NATIONAL DNA DATA BANK OF CANADA

ANNUAL REPORT

2015/2016

ANY INQUIRIES REGARDING THE CONTENT OF THIS REPORT OR REQUESTS FOR ADDITIONAL COPIES SHOULD BE ADDRESSED TO:

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

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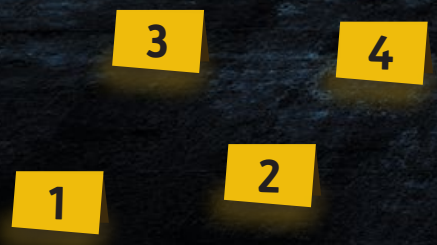


MESSAGE FROM THE COMMISSIONER

ROYAL CANADIAN MOUNTED POLICE

It gives me great pleasure to present the 2015/2016 National DNA Data Bank (NDDB) Annual Report. Since its inception in 2000, the NDDB has become a vital investigative resource for law enforcement, helping to solve both recent and cold-case crimes. The success stories we cite in this year's Report are just a few examples of offences old and new to which the NDDB has helped bring closure.

Over the past 16 years, the number of DNA profiles contained in the Data Bank's two indices has grown dramatically, from approximately 8,200 profiles recorded in the 2000/2001 NDDB Annual Report to more than 444,000 profiles at the time of this report. Supporting legislation and the diligence of our partners has expanded the number of profiles in the Data Bank. Never has DNA been more important to solving crimes and it will continue to be increasingly relied upon by the Courts as compelling evidence to support their decisions.

The NDDB's achievements would not have been possible without the determination of police investigators, the proficiency of forensic scientists and the enthusiastic support of our partners in the criminal justice system. I must also acknowledge the indispensable guidance of the NDDB's Advisory Committee as their leadership and direction play a fundamental role in the Data Bank's accomplishments.

The new National Missing Persons DNA Program, scheduled to be operational by April 1, 2017, will introduce a national foundation and a collaborative resource that can be leveraged by police, coroners and medical examiners investigating cases that involve missing persons and unidentified human remains. As stewards of the NDDB and the National Centre for Missing Persons and Unidentified Remains (NCMPUR), we are examining international best practices to guide the

implementation of Canada's first humanitarian DNA indices. The RCMP is committed to working with all police agencies, coroners and medical examiners to help locate missing persons, identify human remains and provide families with the answers they seek.

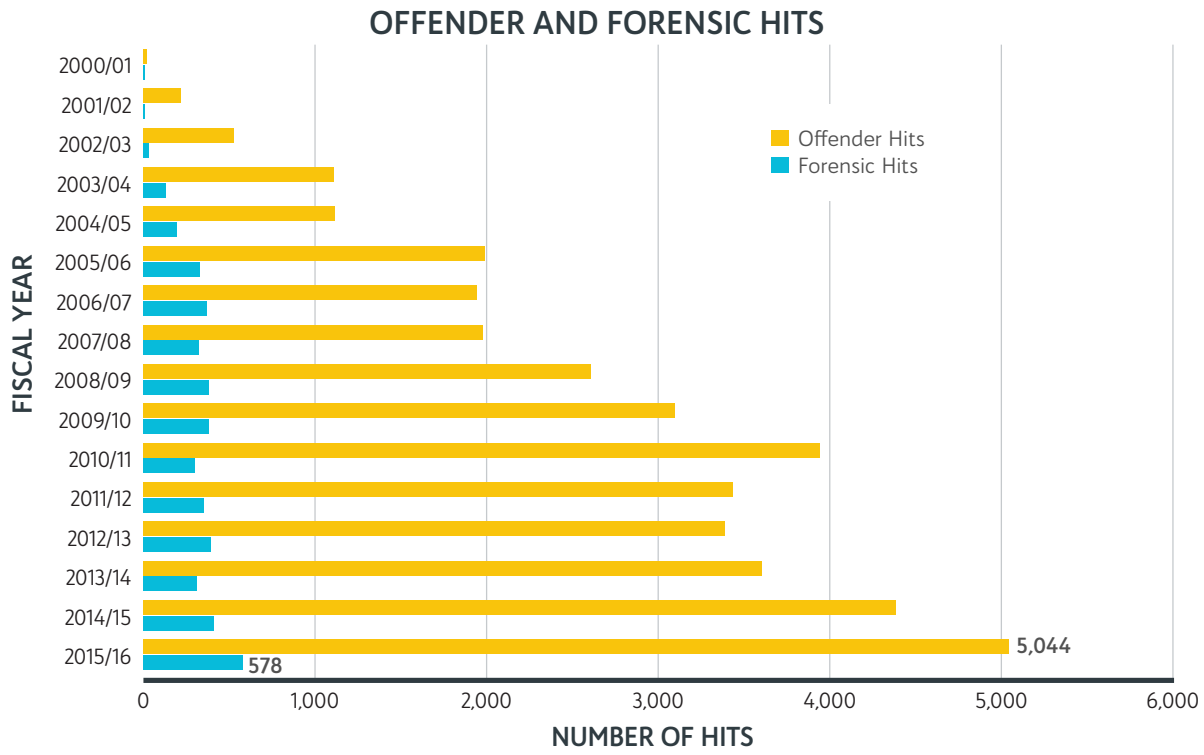
As we look back on another year of achievements, we are also looking forward to enhancing the services we provide and to helping conclude many more outstanding investigations.

Bob Paulson
Commissioner

QUICK FACTS

Convicted Offender Samples Received in 2015/16[2]	DNA Profiles Contained in the Convicted Offenders Index	Increase in Crime Scene Index DNA Profiles in 2015/16	DNA Profiles Contained in the Crime Scene Index
21,794	326,989	11,556	117,163
Offender Hits (Convicted Offender to Crime Scene) in 2015/16	Offender Hits since June 30, 2000	Forensic Hits (Crime Scene to Crime Scene) in 2015/16	Forensic Hits since June 30, 2000
5,044	39,539	578	4,477
DNA Profiles Contained in the NDDB[1]	Investigations Assisted by the NDDB since June 30, 2000 (Offender and Forensic Hits)	Investigations Assisted by the NDDB in 2015/16 (Offender and Forensic Hits)	
444,152	44,016	5,622	

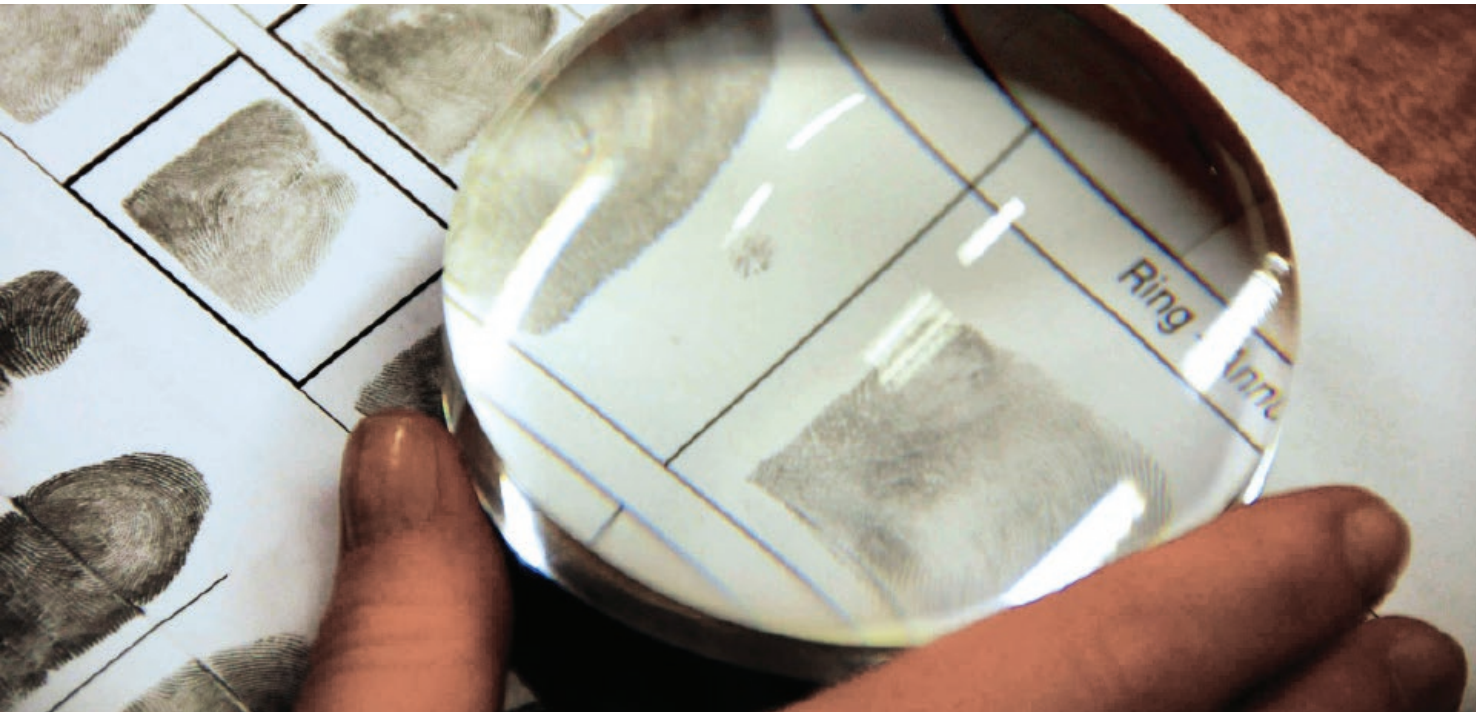
[1] If no date range is specified the data refers to the period from June 30, 2000 through March 31, 2016
[2] 2015/16 refers to the NDDB's fiscal year from April 1, 2015 through March 31, 2016



As more DNA profiles are entered into the NDDB, the number of days required for the Offender Hits to increase by a factor of 1,000 has decreased. It took more than three years for the NDDB to reach its first milestone of 1,000 hits. Since 2010/11 that same 1,000 increment milestone has been achieved on average in less than three months.

THE NATIONAL DNA DATA BANK

The RCMP is the steward of the NDDB on behalf of the Government of Canada. It operates the NDDB for the benefit of the entire law enforcement community within Canada.



Confirming the Government of Canada's commitment to combat crime, especially violent crime, Bill C-3, the *DNA Identification Act* (S.C. 1998 c. 37) received Royal Assent on December 10, 1998. The RCMP built the NDDB after Bill C-3 received Royal Assent.

In 2000, Parliament enacted Bill S-10, *An Act to Amend the National Defence Act, the DNA Identification Act and the Criminal Code* (S.C. 2000, c. 10). The NDDB became operational on June 30, 2000 when Bills C-3 and S-10 were proclaimed.

The NDDB improves the administration of justice by contributing to the early identification of those who commit serious crimes:

- Linking crimes where there are no suspects;
- Helping to identify suspects;
- Eliminating suspects where there is no match between crime scene DNA and profiles in the NDDB; and
- Determining whether a serial offender is involved.

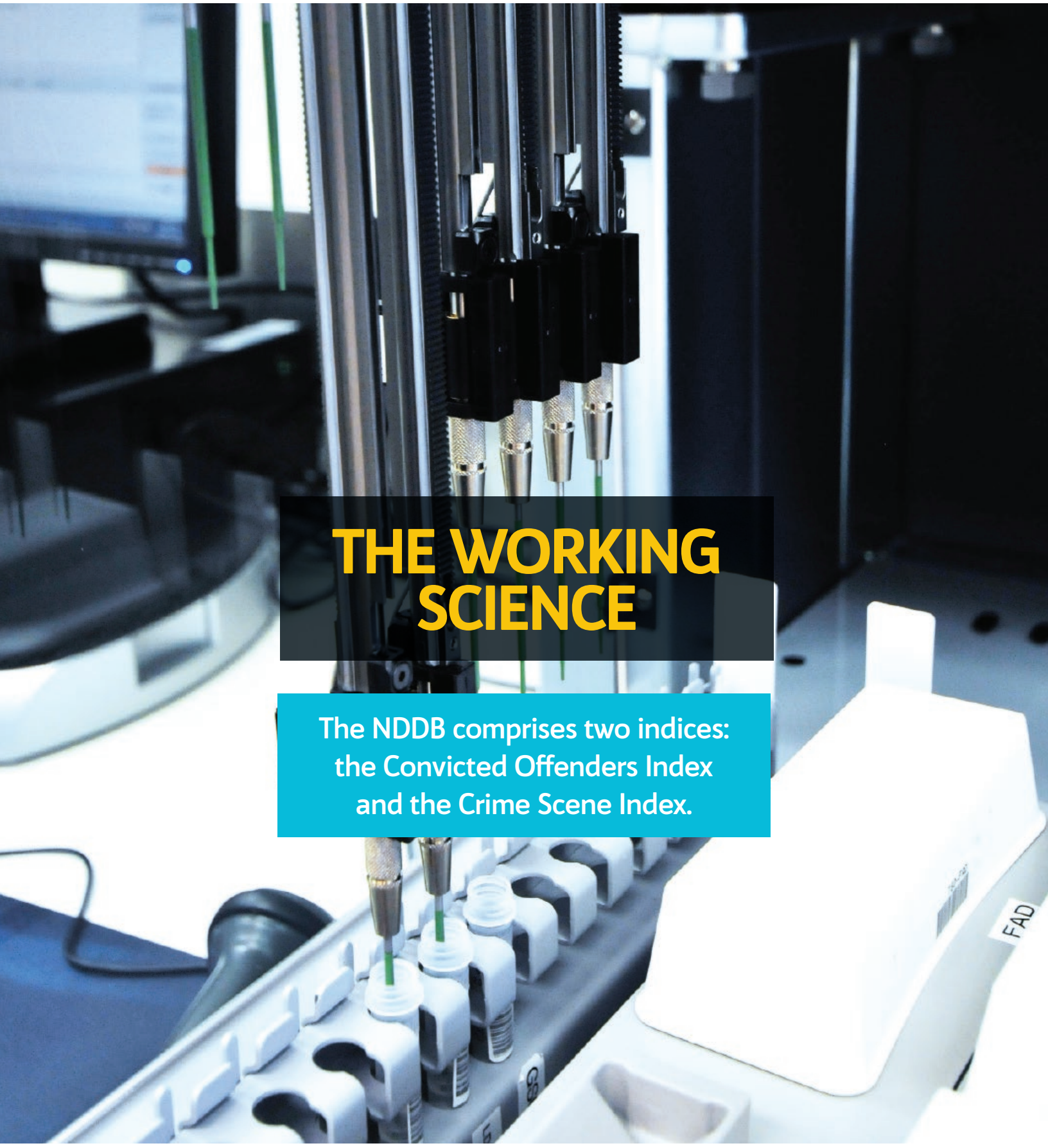
The NDDB conducts the following comparisons to assist in criminal investigations:

- DNA profiles developed from crime scene samples are compared against DNA profiles from other crime scenes to identify potential links between different investigations and assist with solving these crimes. "Forensic Hit" is a term used to indicate a DNA match between DNA profiles within the Crime Scene Index (CSI).
- DNA profiles developed from crime scene samples are compared against convicted offender DNA profiles to associate an offender with a particular crime. "Offender Hit" is a term used to indicate a DNA match between a crime scene DNA profile in the CSI and the DNA profile of a convicted offender in the Convicted Offenders Index (COI).

RECENT CHANGES IN LEGISLATION

A detailed chronology of DNA legislation in Canada is available at the NDDB website:

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



THE WORKING SCIENCE

The NDDB comprises two indices: the Convicted Offenders Index and the Crime Scene Index.

THE CONVICTED OFFENDERS INDEX (COI)

Biological samples collected from convicted offenders are processed by the NDDB and the resulting DNA profiles are entered into the COI.

The COI is the electronic DNA profile database developed from biological samples collected from:

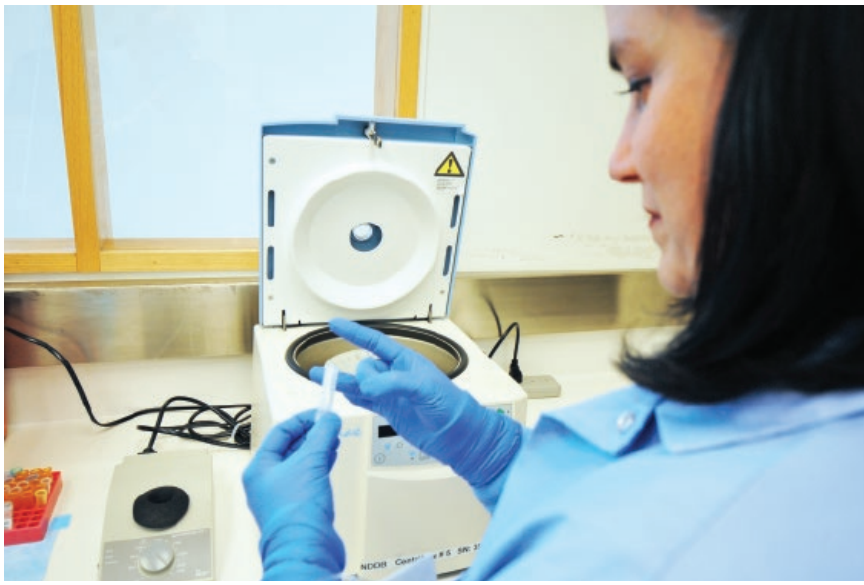
- Offenders convicted of designated primary and secondary offences (see Appendix A) identified in section 487.04 of the *Criminal Code*; and
- Offenders who meet the retroactivity criteria in section 487.055 of the *Criminal Code*. In general terms, this applies to those convicted of certain serious offences who were already serving a sentence or who had been declared a dangerous offender or a dangerous sexual offender before June 30, 2000 when the *DNA Identification Act* was proclaimed. (See Key Statistics explanatory notes for a complete description of retroactive provisions).

Biological samples from convicted offenders are collected by:

- A peace officer who is able, by virtue of training or experience, to take samples of bodily substances from the person, by means of the procedures described in subsection 487.06 of the *Criminal Code*; or
- Another person who is able, by virtue of training or experience, to take under the direction of a peace officer, samples of bodily substances from the person, by means of those procedures.

These biological samples are obtained using NDDB-specific sample kits designed for the collection of the following 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.



> "Convicted offender biological samples are collected and submitted to the NDDB to be processed into DNA profiles."

Convicted offender biological samples are collected and submitted to the NDDB to be processed into DNA profiles. Robotics technology, coupled with a sophisticated Sample Tracking and Control System (STaCS™), allows NDDB analysts to rapidly and efficiently process samples while ensuring overall data security and providing quality control throughout the DNA analytical process. Depending on the technology used, the DNA profiles generated are the result of 14 to 18 specific DNA markers that are tested to produce profiles which show a high degree of variability between individuals (with the exception of identical twins).

DNA profiles are loaded into the Combined DNA Index System (CODIS), a software package that stores and compares the profiles. CODIS was developed by the Federal Bureau of Investigation and the U.S. Department of Justice and is provided to the NDDB at no cost. The CODIS software is a universally accepted tool for forensic laboratories, which allows the NDDB to compare DNA profile information using a standard, secure format.

As of March 31, 2016, the COI contained 326,989 DNA profiles.

THE CRIME SCENE INDEX (CSI)

The CSI is a separate electronic database composed of DNA profiles obtained from crime scene investigations of the same designated offences as the COI. Exhibits containing biological evidence are collected by investigators and submitted to a forensic laboratory for examination and development of DNA profiles. The following forensic laboratory systems are authorized to upload DNA profiles using CODIS into the CSI:

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

The NDDB retains the electronic DNA profile information as well as basic details such as the date, location of the submitting laboratory and a unique sample number identifier that allows information to be compared by the submitting laboratory in the event of a future DNA match.

As of March 31, 2016, the Crime Scene Index contained 117,163 DNA profiles.

PRIVACY OF INFORMATION

The NDDB adheres strictly to the *DNA Identification Act*, which balances privacy rights with the need for police officers to identify suspects. Stringent procedures governing the handling of biological samples and resulting DNA profiles ensure that the privacy rights of individuals are protected.

It is important to note that convicted offender samples are identified simply by a bar code number and that crime scene samples are identified by a unique sample number identifier. In fact, the donor identity of a convicted offender is separated from the genetic information when the biological sample arrives at the NDDB. The bar code is the only link between personal information, the biological sample and the DNA profile. The personal information is protected information that is not accessible by NDDB staff, and is kept in a separate registry by the RCMP's Canadian Criminal Real Time Identification Services.

The *DNA Identification Act* makes it clear that the NDDB DNA profiles can only be used for law enforcement purposes. The NDDB does not share the DNA profiles with anyone other than law enforcement agencies. The 14 to 18 specific markers comprising the DNA profile are considered anonymous and, other than gender, do not provide specific medical or physical information about the donor. The genetic regions chosen by the NDDB are the same regions of genetic variation used throughout the United States and in many other countries conducting forensic DNA analysis.

> "Stringent procedures ... ensure that the privacy rights of individuals are protected."

INTERNATIONAL PARTICIPATION

The NDDB shares DNA information through an international agreement with INTERPOL, approved by the Government of Canada, which limits its use to the investigation and prosecution of criminal offences. Since April 25, 2002 (date of signed International Agreement), the NDDB has received 1,500 incoming international requests to search its DNA indices—the Convicted Offenders Index and the Crime Scene Index—resulting in 5 Offender Hits and 9 Forensic Hits. The NDDB has sent out 236 requests to other INTERPOL countries for comparison of DNA profiles developed from crime scene samples, resulting in 4 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 NDDB to provide support for missing persons and unidentified human remains investigations by creating three new humanitarian DNA indices. The Bill also allows for the creation of two new criminal DNA indices that will strengthen the NDDB's support for criminal investigations.

In accordance with Canadian law, this new legislation will allow DNA profiles from human remains, missing persons and the relatives of missing persons to be collected and added to the NDDB. 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 NDDB 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 NDDB. Once the NMPDP is operational, the NCMPUR will provide investigators with best practices and advice on using the new DNA indices, 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 2017.

PROCESS FOR REPORTING A DNA MATCH

CRIMINAL INVESTIGATIONS

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

Forensic laboratories process biological samples left at crime scenes and upload 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.

Bar code, laboratory identifier and CODIS identifier are brought to 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

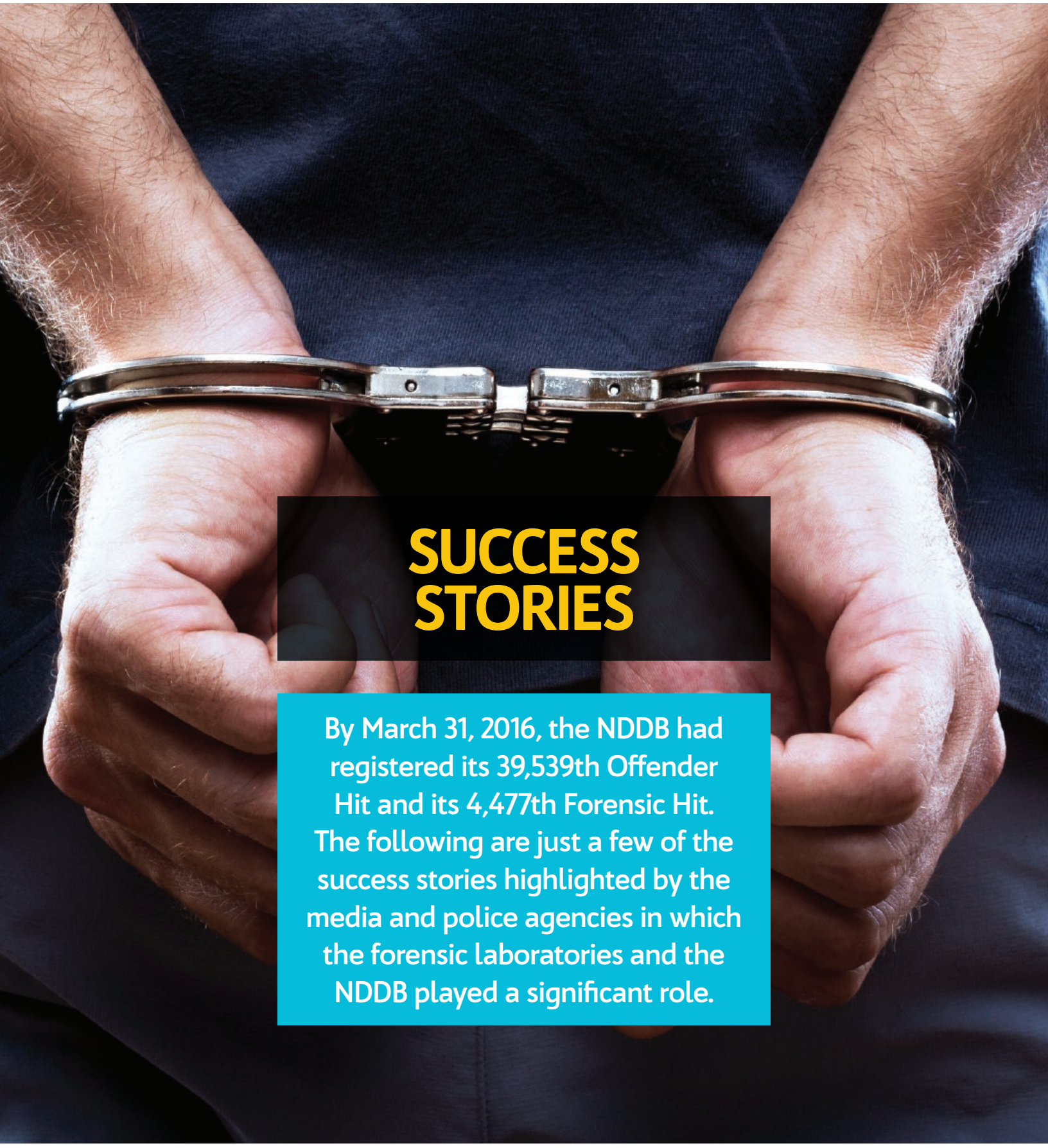
The investigator assesses the case evidence to determine if further investigation of the suspect is required.

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 if charges should be laid or recommended against the suspect.



SUCCESS STORIES

By March 31, 2016, the NDDB had registered its 39,539th Offender Hit and its 4,477th Forensic Hit. The following are just a few of the success stories highlighted by the media and police agencies in which the forensic laboratories and the NDDB played a significant role.

RAPE CONVICTION HELPS SOLVE COLD CASE

In July 1990, in Kingsland, Alberta, a young woman woke in the middle of the night to discover that a man had broken into her bedroom; brandishing a weapon, he gagged and restrained her with duct tape, threatened to kill her and then raped her before fleeing. The police investigation produced no leads and the case went cold. More than two decades later, it was finally solved when police re-examined the evidence and matched DNA from the case to a DNA profile in the NDDB's COI. The same man who committed the 1990 Kingsland rape went on to rape a 14-year-old girl in Edmonton in 1992. He was also found to have committed a much earlier sexual assault in Calgary in 1983. After being found guilty of the 1992 rape, he was sentenced to nine years in prison. In 2000, while he was still serving his sentence, the NDDB was established. In 2001, he was retroactively required to submit a sample of his DNA to the NDDB so his DNA profile was in the COI in 2010 when evidence from the Kingsland cold-case rape was re-examined. In 2014, on the first day of a trial predicted to last three weeks, the man pleaded guilty to sexual assault, break and enter to commit sexual assault and unlawful confinement. He was sentenced to eight years in prison.

> "Some victims I have worked with believed the offender in their case would never be caught. As a Sex Crimes/Cold Case investigator, I cannot tell you how important the NDDB has been in helping me bring closure and justice to these cases. What I like most is that the DNA evidence is insurmountable."

Detective Rene Lafreniere
Special Investigations Section
Sex Crimes/Cold Case Unit
Calgary Police Service

THIEF CAUGHT QUICKLY, THANKS TO DNA

In October 2008, in Halifax, Nova Scotia, two neighbouring houses were broken into and robbed. In both houses, blood found at the entry points was swabbed and later generated matching DNA profiles. The DNA from the blood was also found to match a DNA profile in the NDDB's COI. A career criminal, the suspect's DNA was added to the COI in 2004 following a conviction for breaking and entering. The suspect was arrested and after being informed of the DNA evidence against him, he pleaded guilty at trial in 2010 and was sentenced to two years in prison.

Cases like these demonstrate how the NDDB can help police solve cases efficiently, freeing up their time for other investigations.

> "Had a match not been made with the blood recovered inside the residences, charges would not have been laid. We did not have any witnesses nor did we recover anything stolen. Without the DNA from the Data Bank, these two break and enters would not have been solved."

Sergeant Chris Thomas
Halifax Regional Police

DNA HELPS SOLVE COLD-CASE CHILD SEXUAL ASSAULT

At dusk on a June evening in 1997, an 11-year-old girl in Ottawa, Ontario, was accosted by a man in a public park while riding her bike the short distance between her parents' houses. The man exposed himself and threatened to kill her if she screamed, then forced her into the bushes where he raped her. A DNA profile generated from semen found on the girl's clothing led to no arrests but was added to the NDDB's CSI shortly after the Data Bank was established in 2000. Sixteen years later, a man was ordered to provide a DNA sample after he was found guilty of sexually assaulting a four-year-old child. His DNA profile was added to the NDDB's COI where it immediately matched the DNA profile generated from the semen found on the Ottawa girl's clothing. In July 2015, he was found guilty of sexual assault, forcible confinement, uttering death threats and other charges related to the 1997 cold case. The Crown prosecutor asked the court for an assessment to determine whether he should be designated a dangerous offender since he had two separate convictions for sex crimes against children occurring years apart. He is currently awaiting sentencing.

> "The NDDB was vital in identifying a suspect in this case. SACA did not have any leads and without the NDDB hit it might well have remained unsolved. It is such a valuable tool for investigators."

Detective Johanne Marelic
Sexual Assault and Child Abuse (SACA)
Ottawa Police Service

DNA LEADS TO ARSON ARREST

On a Saturday afternoon in April 2006, in Kenora, Ontario, a man broke into the City Hall building. He emptied several boxes of files into a stairwell, set the paper on fire then fled. Fire fighters arrived in time to save the building, which sustained almost $200,000 in damages. The arsonist had cut himself while breaking in through a third-floor window. A DNA profile was generated from the blood droplets found at the scene and was added to the NDDB's CSI. The initial investigation produced no suspects and the crime remained unsolved for eight years. In March 2014, a man found guilty of assault was ordered to provide a DNA sample for addition to the NDDB's COI. That DNA profile matched the DNA profile generated from the blood found at the scene of the Kenora City Hall fire. In 2015, the man was charged with arson. He was fined and sentenced to 14 months in prison.

> "Damage to this historic building was pretty extensive. From the reports, it appears investigators had no idea this guy was involved. DNA saved the day!"
>
> **Detective Sergeant Jeffrey Duggan**
> *Area Crime Sergeant, Northwest Region Crime Unit*
> *Kenora Detachment*
> *Ontario Provincial Police*

MURDER OF VOLUNTEER SOLVED 24 YEARS LATER

In July 1990, in Saskatoon, Saskatchewan, a 57-year-old woman was beaten, sexually assaulted and stabbed to death in her home. A former teacher, she had been volunteering at a local community centre and was known to be a trusting and generous person. Police collected evidence at the scene and conducted hundreds of interviews but were unable to arrest anyone for the crime. In 2012, the detective assigned to review the cold case received authorization to re-submit the crime scene evidence for DNA analysis. The DNA profile of an unknown male was developed from a piece of clothing and was found to match DNA profiles from two other investigations in which the same man was a known suspect. In 2013, the suspect was arrested and charged with murder. The evidence against him was so conclusive that rather than going to trial, the man pleaded guilty to second-degree murder. He is currently serving a mandatory life sentence.

> "Of note, when I took over the investigation, there were 37 possible suspects in the file but [the offender] was not one of them. Going back through the file, his name was found only once – he was one of the many who signed the funeral registry for [the victim]. Without the work of the lab and the subsequent scene-to-scene hits, this file would not have been solved."
>
> **Detective Sergeant Grant Little**
> *Historical Case Unit*
> *Major Crime*
> *Saskatoon Police Service*

IMPROVED DNA TECHNOLOGY LINKS SERIAL SEX OFFENDER TO MURDERED CHILD

On a June evening in 1995, in Auteuil, Quebec, a nine-year-old girl disappeared while walking to a friend's house. A 21-year-old man, with a history of committing violent sexual assaults, raped and drowned the child before disposing of her body in a swamp. Just one month earlier, he had been released from prison after serving time for sexually assaulting two teenage girls on separate occasions. Even though the man had initially been considered a suspect during the investigation of the child's murder, the case remained unsolved. In 2009, improved technology and the establishment of a cold case unit prompted Laval police to reopen the case. A ski mask found near the crime scene was re-analyzed using DNA technology that hadn't existed when the little girl was killed. It generated a DNA profile that matched a serial sex offender whose DNA profile was already in the NDDB's COI. The same DNA was also found to match semen on the little girl's underwear. In 2001, the offender was retroactively ordered to produce a DNA sample because he had been convicted of committing two sexual assaults, one in 1993 and another in 1996. Sixteen years after the little girl's body was found, Laval police charged the offender with her rape and murder. In 2014, he was convicted of first-degree murder, sexual assault and forcible confinement. He is currently serving a life sentence without possibility of parole for 25 years.

> "The evolution of DNA technology allowed a new start in this investigation. If government and the courts would mandate that all offenders must submit their DNA profiles to the NDDB, just as they have to register their fingerprints, we would be far more efficient in fighting and preventing crime."

Martin Saillant, Lieutenant Detective
Crimes majeurs A
Service de police de Laval

NATIONAL DNA DATA BANK ADVISORY COMMITTEE

MESSAGE FROM THE CHAIRPERSON

Every year, the dedicated staff of the National DNA Data Bank (NDDB) work to ensure that DNA technology is providing front-line investigators with the tools they need to unravel criminal cases that might otherwise remain unsolved. Recent crimes and cold cases alike are aided by this invaluable form of evidence, which helps track down and incarcerate dangerous offenders while simultaneously clearing the names of innocent and wrongly-accused individuals.

This past year has been one of continued success for the NDDB. As the Data Bank has proven its reliability, the justice system's willingness to accept and rely upon DNA evidence has solidified. The success stories featured in this document are excellent examples of the variety of criminal investigations assisted by DNA evidence.

I have absolute confidence in the stewardship that the NDDB Advisory Committee provides to the Data Bank. The Advisory Committee was established in 2000 under the mandate of the *DNA Identification Act* and is comprised of men and women whose accomplishments in their fields represent a collective wealth of expertise in science, ethics, privacy, policing and the law.

I would particularly like to thank the Committee members for the advice and assistance they provided this year to the NDDB on its operations and to those developing the new National Missing Persons DNA Program. As Chair of the Advisory Committee, I felt their guidance was essential.

In grateful acknowledgement of the commitment of scientists, investigators and our partners in the criminal justice system, I am proud to support the 2015/2016 NDDB Annual Report.

Garry Loeppky, O.O.M.
Deputy Commissioner (retired),
Chairperson
National DNA Data Bank
Advisory Committee

NATIONAL DNA DATA BANK ADVISORY COMMITTEE MEMBERS

GARRY LOEPPKY

O.O.M. Garry Loeppky, D/Commr. (Rtd), served with the Royal Canadian Mounted police for 34 years. Throughout his career, D/Commr. Loeppky (Rtd) was responsible for coordinating and leading major investigations on both a domestic and international level. He worked with numerous foreign law enforcement organizations and has lectured in a number of countries including Canada, Australia, the United States, and Europe.

PATRICIA KOSSEIM

Patricia Kosseim is Senior General Counsel at the Office of the Privacy Commissioner of Canada, where she provides strategic legal and policy advice, represents the Privacy Commissioner before courts and Parliamentary Committees, and oversees research on emerging privacy issues. Previously, Ms. Kosseim worked at Genome Canada and the Canadian Institutes of Health Research, where she led national strategies for addressing ethical, legal and social implications of science and technology. She presents, publishes and teaches on matters of health law, privacy and ethics.

DR. FREDERICK R. BIEBER

Canadian-born Associate Professor of Pathology in the Faculty of Medicine at Harvard University, Boston, Massachusetts. Dr. Bieber is a medical geneticist and a specialist in bio-medical ethics.

GISÈLE CÔTÉ-HARPER

O.C., Q.C., graduate of Harvard Law School and currently a Barrister and Emeritus Professor at the Faculty of Law, Université Laval. Mme Côté-Harper is recognized nationally and internationally as a legal expert on human rights issues.

WILLIAM S. DAVIDSON PH. D.

Medical Genetics Specialist and Professor of Molecular Biology and Biochemistry, Simon Fraser University (Burnaby, B.C.). Dr. Davidson has published widely in the areas of molecular evolution, population genetics, genomics and human genetics.

DR. RON FOURNEY

O.O.M., Director, Science and Strategic Partnerships, Forensic Science and Identification Services, RCMP. Dr. Fourney is a research scientist and founding member of the RCMP DNA program. He has been instrumental in the development and implementation of forensic DNA typing for Canada.

DR. ANJALI MAZUMDER

Dr. Mazumder holds a Doctorate in Statistics from the University of Oxford and is a Research Fellow in the Department of Statistics at the University of Warwick. Dr. Mazumder has published widely in the fields of forensic DNA identification and value of evidence analysis using probabilistic expert systems and best practices in forensic science.

DERRILL PREVETT

Q.C., J.D. (University of British Columbia), with 37 years of legal experience. Many of his criminal cases involved forensic evidence, particularly forensic DNA analysis. From 2002 until 2007, Mr. Prevett was a key member of the prosecution team for the trial of Robert William Pickton. He is internationally recognized as a legal expert on DNA evidence. He has lectured at various professional venues in Canada and abroad including the Justice Institute of B.C., Vancouver Island University, The University of Victoria, Osgoode Hall, the Canadian Society of Forensic Science and the International Association of Forensic Sciences.

KEY STATISTICS

(June 30, 2000 through March 31, 2016)

TABLE 1 – CASES ASSISTED BY THE NDDB

Breaking and Enter	12,578
Sexual Offence	4,664
Robbery	4,423
Assault	3,071
Homicide	2,699
Attempted Murder	835
Other	11,269
TOTAL	**39,539**

TABLE 2 – MATCH INVENTORY REPORT

Offender Hit (Crime Scene Index to Convicted Offenders Index)	39,539
Forensic Hit (Crime Scene Index to Crime Scene Index)	4,477
Offender Duplicate (Two sample submissions received from the same offender – laboratory analysis completed for both)[1]	13,544
Identical DNA Profiles (from different individuals i.e. identical twins)	289

[1] 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 Crime Scene Index of the NDDB matches a DNA profile in the Convicted Offenders Index.

Forensic "Hit": A DNA profile developed from crime scene evidence and entered in the Crime Scene Index of the NDDB 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: Profiles of identical twins.

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

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

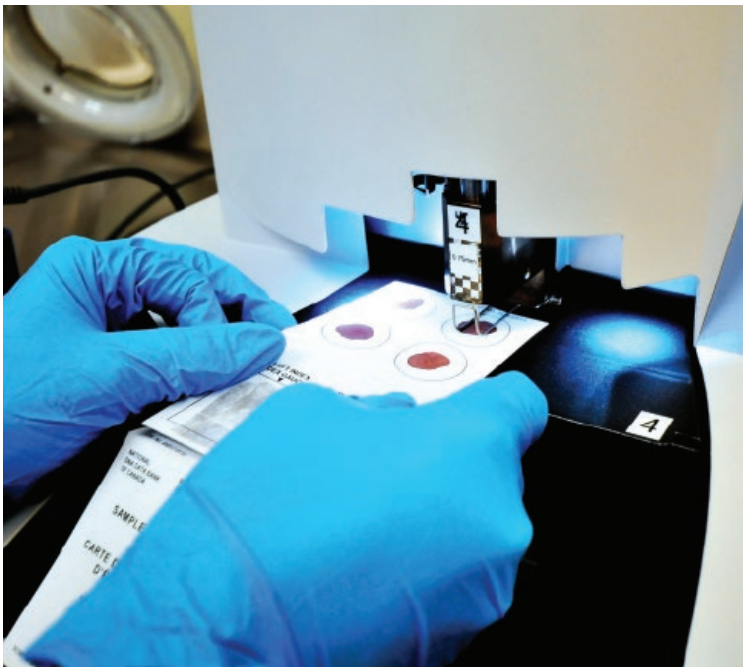


TABLE 3 – DNA PROFILES CONTAINED IN THE NDDB

Convicted Offenders Index	326,989
Crime Scene Index	117,163
TOTAL	**444,152**

NOTE: The NDDB receives 400-500 convicted offender samples per week.

Samples Received versus Profiles Contained in the Convicted Offenders Index:

As of March 31, 2016, the NDDB had received 360,189 biological samples, of which 326,989 DNA profiles were contained in the Convicted Offenders Index. The difference of 9.2 % 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 a discharge, the retention period had expired, or the conviction or the order/ authorization was quashed on appeal.

TABLE 4 – BREAKDOWN OF PROFILES CONTAINED IN THE CRIME SCENE INDEX

Centre of Forensic Sciences	42,249
Laboratoire de sciences judiciaires et de médecine légale	36,710
RCMP National Forensic Laboratory Services	38,204
TOTAL	**117,163**

TABLE 5 – BREAKDOWN OF CONVICTED OFFENDER SAMPLES RECEIVED ACCORDING TO CATEGORY AND OFFENCE TYPE

DNA Orders	355,172
Retroactive Authorizations	5,017
TOTAL	**360,189**

Primary	191,392
Secondary	165,650
Other	3,147
TOTAL	**360,189**

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

EXPLANATORY NOTES

Convicted Offenders Index: A post-conviction database composed of two categories of samples:

1. **DNA Orders:** Includes DNA samples collected from offenders who are convicted of an offence committed at any time, including before June 30, 2000, if the offence is a designated offence when the person 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 and who had been:
   a. Declared a dangerous offender under Part XXIV of the *Criminal Code;*
   b. Declared a dangerous offender or a dangerous sexual offender under Part XXI of the *Criminal Code;*
   c. Convicted of murder;
      c.1 Convicted of attempted murder or conspiracy to commit murder or to cause another person to be murdered and is currently serving a sentence of imprisonment for that offence;
   d. Convicted of a sexual offence within the meaning of subsection 487.055(3) of the *Criminal Code* and is currently serving a sentence of imprisonment for that offence; or
   e. Convicted of manslaughter and is currently serving a sentence of imprisonment for that offence.

As of March 31, 2016, approximately 6,244 offenders qualified for inclusion in the retroactive category as defined by Bills C-3 and C-13/C-18. From this list of qualified offenders, 6,159 files were concluded with the remainder being prepared by the Attorneys General for court applications.

Primary and Secondary Offences: See Appendix A.

TABLE 6 – CONVICTED OFFENDER SAMPLES RECEIVED BY PROVINCE/TERRITORY

	June 30, 2000 to March 31, 2016	April 1, 2015 to March 31, 2016
British Columbia	42,318	2,249
Alberta	38,616	2,506
Saskatchewan	15,331	966
Manitoba	21,869	1,329
Ontario	157,632	9,195
Quebec	59,639	4,001
New Brunswick	4,581	334
Nova Scotia	9,632	633
Prince Edward Island	926	68
Newfoundland & Labrador	5,123	244
Yukon	613	77
Northwest Territories	2,045	101
Nunavut	1,864	91
TOTAL	**360,189**	**21,794**

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.

TABLE 7 – TYPE OF SAMPLES RECEIVED FROM CONVICTED OFFENDERS

Blood	355,524
Buccal	4,349
Hair	316
TOTAL	**360,189**

TABLE 8 – BREAKDOWN OF CONVICTED OFFENDER SAMPLES RECEIVED

Adult Offender	316,349
Young Offender	43,758
Military Offender	82
TOTAL	**360,189**

SAMPLE REJECTIONS

The NDDB has rejected only 5,333 (1.5 %) of the samples it has received to date. Reasons for rejection include: offender convicted of a non-designated offence, inadequate biological samples, use of inappropriate collection kit, missing/invalid DNA order and others. More than 54.4 % of the samples rejected were collected from offenders convicted of non-designated offences and are therefore not eligible for inclusion in the Convicted Offenders Index. More than 26.3 % of the samples rejected were collected from offenders using an inappropriate collection kit.

COLLECTION OF ADDITIONAL BODILY SUBSTANCES

In some instances, bodily substances have to be taken a second time, pursuant to a re-sampling authorization issued under subsection 487.091(1) of the *Criminal Code* which provides for an application for re-sampling when the original biological sample submitted is rejected. If the quality of the biological sample submitted is deemed inadequate for DNA analysis or if it had not been transmitted in accordance with the *DNA Identification Regulations*, the sample is rejected. Since June 30, 2000, the NDDB has received 1,030 samples that were taken under this provision.

TABLE 9 – CONVICTED OFFENDER SAMPLES RECEIVED – BREAKDOWN BY OFFENCES

Assault	219,825
Sexual Offence	69,357
Break and Enter	52,110
Robbery	43,592
Controlled Drugs and Substances Act	31,784
Homicide	8,837
Other	42,520
TOTAL	**468,025**

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

EXPLANATORY NOTES

Assault: includes assault with a weapon or causing bodily harm, aggravated assault, assaulting a peace officer, overcoming resistance to commission of offence, criminal harassment and uttering threats.

Break and Enter: includes break and enter with intent, being unlawfully in a dwelling-house, break and entering a place other than dwelling-house and possession of break-in instruments.

Robbery: includes robbery and extortion.

Sexual Offence: includes rape, sexual intercourse with a female under 14 and between 14 and 16, sexual intercourse with the feeble-minded, sexual interference, invitation to sexual touching, sexual exploitation, incest, bestiality, child pornography, indecent acts, offence in relation to juvenile prostitution, sexual assault with a weapon, aggravated sexual assault, sexual assault, indecent assault, gross indecency, prostitution and luring a child.

Homicide: includes manslaughter.

Controlled Drugs and Substances Act: includes .possession for the purpose of trafficking, import or export of a controlled substance, trafficking and production of substances. In 2008, Canadian legislation changed to allow DNA samples to

be collected from offenders sentenced for a range of less serious criminal offences, including convictions under the *Controlled Drugs and Substances Act* (CDSA). Since January 1, 2008, the enabling changes in legislation for CDSA offences alone allowed for the collection of 31,784 DNA samples. So far, these samples have resulted in 1,282 convicted offender hits that have assisted in the investigation of 135 murders and 140 sexual assaults.

The Other category includes: using explosives, causing death by criminal negligence, causing bodily harm by criminal negligence, causing bodily harm with intent, dangerous operation causing death, failure to stop at the scene of an accident, impaired driving causing death, unlawfully causing bodily harm, kidnapping, hostage taking, mischief causing danger to life, arson (disregard to human life), setting fire to other substance, arson (own property), firearms, fraud, counterfeiting, criminal organization, escape, flight, theft over $5,000, forgery, disguise and intimidation.

TABLE 10 – BREAKDOWN OF BIOLOGICAL SAMPLES DESTROYED AND DNA PROFILES REMOVED FROM THE CONVICTED OFFENDERS INDEX

	ADULT	YOUNG PERSON
Conditional discharge	8,097	1,045
Conviction quashed on appeal	575	26
Absolute discharge	389	66
Duplicate sample (same order)	333	29
No suitable DNA profile obtained	103	17
Order/authorization quashed	32	8
Retention period expired	N/A	3,195
Other	54	9
TOTAL	**9,583**	**4,395**

N/A: Not applicable

ENDORSEMENTS

Section 487.071 of the *Criminal Code* requires police officers to verify with the Canadian Police Information Centre (CPIC) whether a convicted offender's DNA profile is already in the NDDB prior to executing every new DNA order or authorization. If the DNA profile of an offender is contained in the Convicted Offenders Index of the NDDB, police officers may not take the bodily substances from the offender but are required to submit the un-executed DNA order or authorization with an endorsement form confirming they have been advised that the person's DNA profile is already contained in the NDDB, along with the offender's fingerprints to the NDDB. The purpose of the endorsement process is to ensure that a convicted offender's DNA profile remains in the NDDB if:

- 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.

Since February 2013 the NDDB has received 3,270 biological samples that were determined to be duplicate samples through a CPIC check prior to laboratory analysis. These were converted to endorsement submissions to prevent unnecessary laboratory analysis of duplicate biological samples. See Table 2 for information regarding duplicate samples which were not identified prior to laboratory analysis.

TABLE 11 – ENDORSEMENTS RECEIVED BY PROVINCE/TERRITORY

	January 1, 2008 to March 31, 2016	April 1, 2015 to March 31, 2016
British Columbia	13,094	1,826
Alberta	10,885	1,956
Saskatchewan	2,024	412
Manitoba	5,454	849
Ontario	58,996	8,679
Quebec	10,440	1,636
New Brunswick	246	88
Nova Scotia	1,690	295
Prince Edward Island	53	15
Newfoundland & Labrador	674	92
Yukon	134	31
Northwest Territories	448	86
Nunavut	346	51
TOTAL	**104,484**	**16,016**

ENDORSEMENT REJECTIONS

The NDDB has rejected only 1,823 (1.7 %) of the endorsements it has received to date. Reasons for rejection include: DNA profile from the offender is not contained in the Convicted Offenders Index, offender convicted of a non-designated offence and others. More than 50.4 % of the endorsements rejected were collected from offenders convicted of non-designated offences.

TABLE 12 – BREAKDOWN OF ENDORSEMENTS RECEIVED

Adult Offender	100,062
Young Offender	4,419
Military	3
TOTAL	**104,484**

TABLE 13 – ENDORSEMENTS RECEIVED - BREAKDOWN BY OFFENCES

Assault	68,176
Break and Enter	21,364
Robbery	12,868
Controlled Drugs and Substances Act	9,856
Sexual Offence	6,561
Homicide	1,089
Other	22,175
TOTAL	**142,089**

NOTE: More than one offence may be associated with an endorsement.

TABLE 14 – SUMMARY OF NDDB INDICES AND INVESTIGATIONS ASSISTED

	2011/12	2012/13	2013/14	2014/15	2015/16
Total Number of CSI DNA Profiles at Year-End	73,836	83,804	94,246	105,607	117,163
Increase in CSI DNA Profiles[1]	9,332	9,968	10,442	11,361	11,556
Total Number of COI DNA Profiles at Year-End	242,184	266,355	288,660	307,910	326,989
Increase in COI DNA Profiles[1]	27,395	24,171	22,305	19,250	19,079
Investigations Assisted[2]	3,790	3,782	3,921	4,796	5,622

[1] Net increase after rejections and removals from indices
[2] Combined Offender and Forensic Hits

FINANCIAL STATEMENT

	April 1, 2015 – March 31, 2016
Expenditure Type	**Expenditure ($ thousands)**
Personnel	2,055
Internal Services	617
Employee Benefit Plan	480
Transport and Telecommunications	15
Development and Infrastructure Support	17
Rentals	3
Repair and Maintenance	9
Utilities, Materials, Supplies and Miscellaneous	1,301
Capital and Minor Equipment Purchases	191
Sub-total	4,688
Allocated Indirect Costs[1]	261
Total	**4,949**

[1] 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.

APPENDIX A

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 that fall under 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 that fall under 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 included in this category are: breaking and entering a place other than a dwelling-house, assault and indecent acts. For a complete list of offences that fall under 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 included 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*.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