

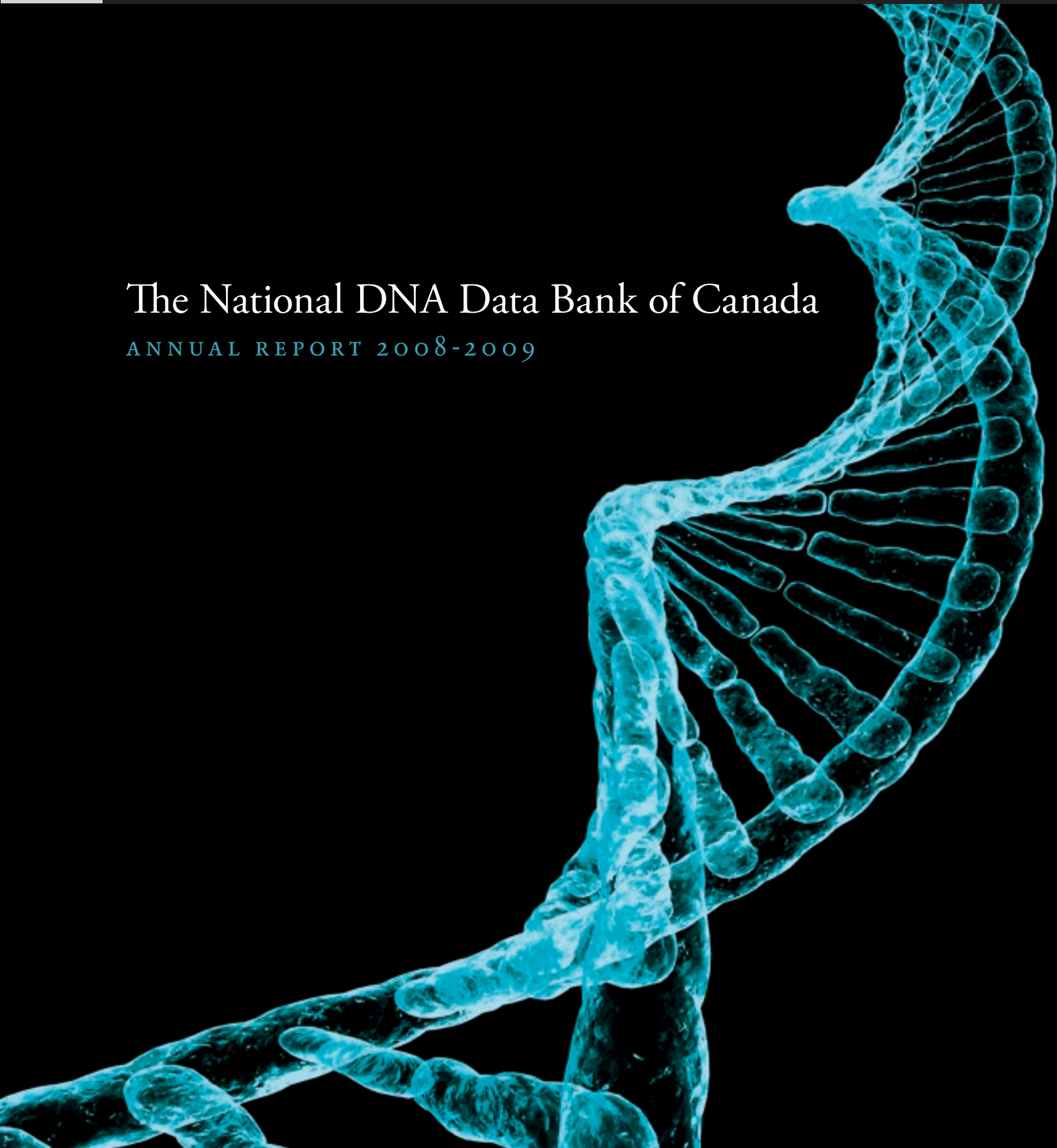
**RCMP**



ROYAL CANADIAN MOUNTED POLICE

# The National DNA Data Bank of Canada

ANNUAL REPORT 2008-2009



Royal Canadian Mounted Police Gendarmerie royale du Canada

Canada 

ANY QUERIES REGARDING THE CONTENT OF THIS REPORT, OR  
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**NATIONAL DNA DATA BANK OF CANADA**

Forensic Science and Identification Services, Royal Canadian Mounted Police

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ISBN 978-0-662-06892-1 CAT. NO. PS61-4/2009

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## Message from the Commissioner, Royal Canadian Mounted Police

It is my privilege to introduce the National DNA Data Bank's ninth annual report. This has been an important year for the National DNA Data Bank as we have seen how effective recent legislative amendments have been at enhancing its role in supporting police investigations across the country.

Following the enactment of Bills C-13 and C-18 on January 1, 2008, Canadian courts were permitted to include more offences for which DNA profiles can be added to the National DNA Data Bank's Convicted Offenders Index (COI). In addition, forensic laboratories could upload more crime scene profiles to the Crime Scene Index (CSI). The amendments have had an immediate and positive impact on work within the National DNA Data Bank, increasing the number of possible matches between CSI and COI profiles and CSI to other CSI profiles.

Since the program's inception in June 2000, more than 158,000 DNA samples from convicted offenders have been processed and added to the National DNA Data Bank, along with DNA profiles received from thousands of crime scenes across the country. Law enforcement agencies rely on the careful handling of this data by the National DNA Data Bank to aid in the successful resolution of investigations.

While the National DNA Data Bank has already undergone significant changes over the past year, the program will continue to evolve. With Parliamentary reviews currently underway, we are eagerly awaiting feedback from key stakeholders and welcome any recommendations that will enhance the effectiveness and efficiency of the program.

In today's society, where crime knows no borders, Canada's National DNA Data Bank welcomes the opportunity to assist with cross-jurisdictional investigations. INTERPOL plays a central part in dialogue between DNA data banks around the world. Canada is committed to participating in that ongoing discussion.

At the same time, the National DNA Data Bank is governed by privacy laws that are strictly enforced throughout the DNA-gathering process. Protecting privacy rights of individuals will continue to be a priority at every level.

The RCMP is a proud advocate of the National DNA Data Bank, which is a key program under the Force's Policing Support Services. We look forward to its continued success and its ongoing evolution on the policing landscape in Canada and abroad.



WILLIAM J.S. ELLIOTT  
COMMISSIONER

## Message from the Assistant Commissioner, Forensic Science & Identification Services

I am pleased to have this opportunity to highlight the achievements of the National DNA Data Bank in this ninth annual report.

Over the past year, the National DNA Data Bank reached an important milestone as it surpassed 10,000 DNA matches between offenders and crime scene DNA profiles on August 29, 2008. Additionally, the number of matches over the past three years alone is more than double the number obtained during the first six years of the National DNA Data Bank's existence. This marked increase clearly demonstrates that the National DNA Data Bank is a valuable tool to law enforcement agencies by linking offenders to crime scenes. It is an increasingly vital resource in the pursuit of justice, helping to solve cross-jurisdictional crimes and resolving decades old-offences.

The increase in the number of DNA matches can, in no small measure, be attributed to the amendments to the *Criminal Code*, the *DNA Identification Act* and the *National Defence Act* which came into effect January 1, 2008. These amendments resulted in an increase in the number of offences for which DNA samples can be collected and added to the National DNA Data Bank. They were also a key contributing factor to a 70% increase in the number of convicted offender samples received by the National DNA Data Bank.

We are proud of the National DNA Data Bank's success, however, we recognize that this success depends very much on the collaboration of our law enforcement partners and the Ontario, Quebec, and RCMP forensic laboratories. The concerted efforts of all partners working together have assisted in making the National DNA Data Bank the important tool it is today.

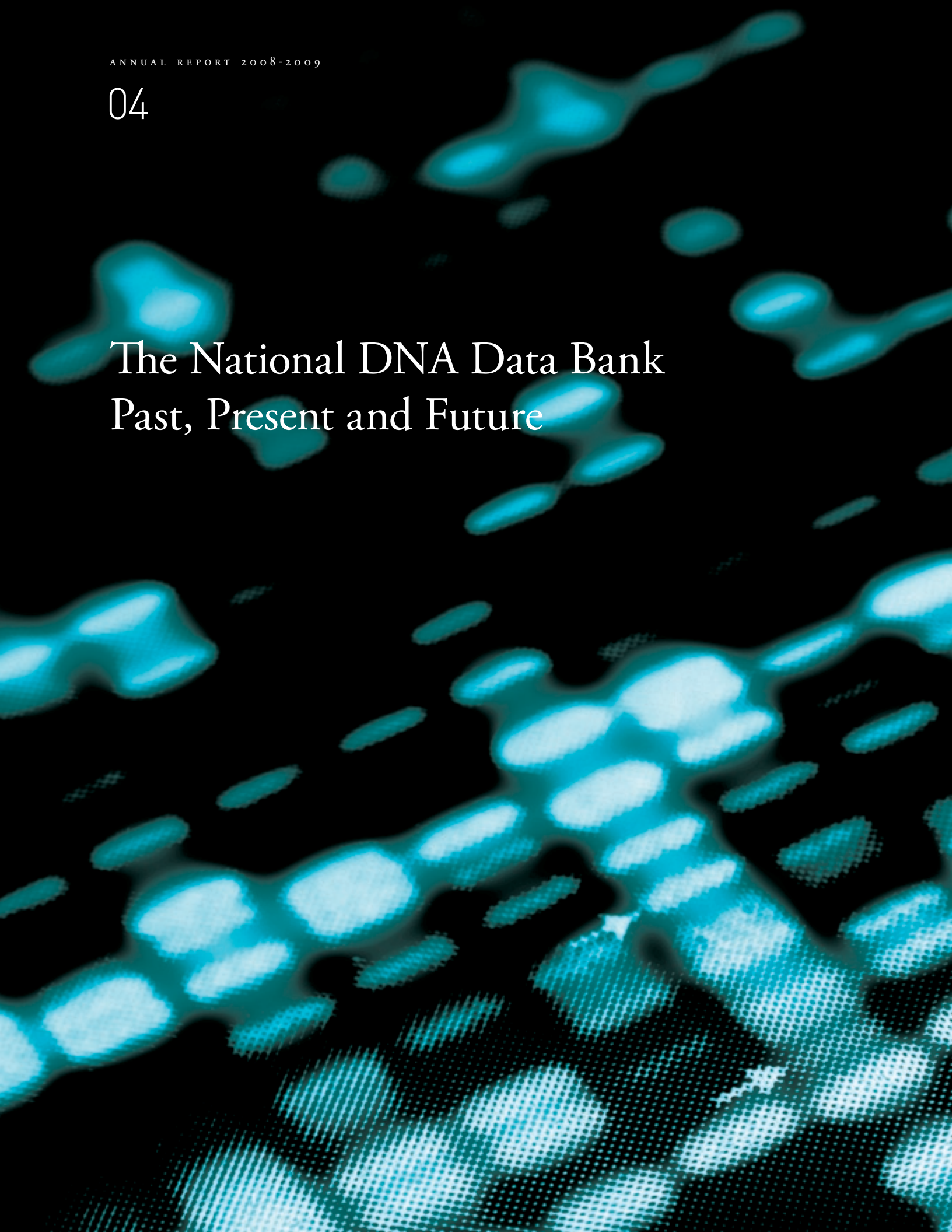
I would also like to take this opportunity to recognize the valuable work of the National DNA Data Bank Advisory Committee and its contribution to the National DNA Data Bank. The Committee, which operates at arm's length from the RCMP, plays a pivotal role by providing advice essential to the effective management of the National DNA Data Bank.

The National DNA Data Bank has evolved over the course of nine years and will continue to do so with the advent of new technologies. We will continue to adapt to the changing legislative environment and remain committed to respecting the rights and privacy of Canadians.



PETER HENSCHEL  
ASSISTANT COMMISSIONER

# The National DNA Data Bank Past, Present and Future



### NATIONAL DNA DATA BANK

Few scientific discoveries have had a greater impact on the field of forensic science than the introduction of forensic DNA analysis. As forensic DNA analysis became more accepted by police and the courts, it became evident that central coordination at the national level was needed. Development of a new tool that would allow the data banking of DNA profiles from crime scenes and convicted offenders, similar to what was already being done with fingerprints, should be pursued. In 1996, a consultation process regarding the establishment of a national DNA data bank began throughout Canada and culminated with the opening of the National DNA Data Bank (NDDDB) on June 30, 2000.

The NDDDB is composed of two indices of DNA information: the Convicted Offenders Index (COI) and the Crime Scene Index (CSI). The COI is made up of DNA profiles obtained from biological samples from convicted offenders, as ordered by judges under the specifications of the *DNA Identification Act* in compliance with the *Criminal Code of Canada* and the *National Defence Act*. The *Criminal Code* identifies a list of designated offences for which biological samples can be obtained from convicted offenders. These offences are separated into primary offences (mainly crimes against persons) and secondary offences (which include crimes against property).

The Crime Scene Index is composed of DNA profiles obtained from unsolved crimes from the same designated offence categories as the COI. These profiles are derived by three Canadian forensic laboratory systems: the Centre of Forensic Sciences (CFS) in Toronto and Sault Ste. Marie, serving the province of Ontario; the Laboratoire de sciences judiciaires et de médecine légale in Montréal, serving the province of Québec; and the Royal Canadian Mounted Police (RCMP) Forensic Science and Identification Services (FS&IS) serving the rest of Canada.

### IMPACT OF BILLS C-13 AND C-18 ON THE NDDB

On January 1, 2008, Bill C-13 *An Act to Amend the Criminal Code, the DNA Identification Act and the National Defence Act* (S.C. 2005, c.25), and Bill C-18, *An Act to Amend Certain Acts in Relation to DNA Identification* (S.C. 2007, c.22), were fully proclaimed to improve and expand the *DNA Identification Act* and the DNA provisions of the *Criminal Code* and the *National Defence Act*. These Bills increased the number of designated offences that can lead to a DNA Data Bank order for inclusion in the COI of the NDDB. Partial proclamation of Bill C-13 in 2005 had enhanced the retroactive scheme which deals with DNA authorizations made against offenders convicted of certain offences prior to the creation of the NDDB in June 2000.

Following the legislative changes in 2008, there are now more than 265 qualifying offences: 62 primary and over 200 secondary. Before 2008, there were only 59 qualifying offences: 38 primary and 21 secondary offences.

The list of primary designated offences has been expanded to include the sexual exploitation of a person with a disability, extortion and intimidation of a justice system participant or journalist, among others. Several other crimes, such as break and enter in a dwelling house, robbery and various offences related to child pornography have been moved from the secondary to the primary list of designated offences. Courts have no discretion and must make a DNA Data Bank order for the 16 primary offences which are deemed to be the most serious. These offences include murder, sexual assault with a weapon, kidnapping and robbery.

The list of secondary offences was also greatly expanded as a result of the 2008 legislative amendments. The list includes *Criminal Code* offences as well as *Controlled Drugs and Substances Act* offences for trafficking, importing, exporting and production of a substance, where the offence has a maximum punishment of five years or more and is prosecuted by indictment. Criminal harassment, uttering threats, and theft over \$5,000 are among these new secondary offences. For secondary offences, the court may, on application by the prosecutor, make an order for the offender to provide a biological sample if it is satisfied that it is in the best interests of the administration of justice to do so.

### ENDORSEMENT PROCESS

With the implementation of Bill C-18, police officers are now required to verify with the Canadian Police Information Centre (CPIC) and determine if a convicted offender's DNA profile already exists in the NDDB prior to executing an order or authorization. If the DNA profile of an offender is contained in the COI of the NDDB, police officers shall not take any bodily substances from the offender but are required to follow endorsement instructions and submit a new DNA endorsement form along with the offender's fingerprints to the NDDB. In 2008-2009 more than 7,200 endorsements were submitted to the NDDB. The purpose of the endorsement process is to ensure that an offender's DNA profile remains in the NDDB should the conviction for the initial offence for which the DNA sample was ordered, is overturned on appeal.



### **DNA PROFILE REMOVAL AND BIOLOGICAL SAMPLE DESTRUCTION**

In accordance with the DNA profile removal and biological sample destruction requirements of the *DNA Identification Act*, policies have been implemented to ensure that a DNA profile and biological sample are only stored for the applicable period that is related to an offender's conviction. Every week, members of the Canadian Criminal Real Time Identification Services (CCRTIS) advise the NDDB to remove DNA profiles from the COI for which the retention period has expired or for orders or convictions that have been quashed on appeal. Each week, between 10 and 20 DNA profiles are removed from the Convicted offenders Index of the NDDB and the associated stored bodily substances destroyed. There is a pre-determined retention period for young offenders and for offenders who receive an absolute or conditional discharge.

The NDDB protects the genetic privacy of the convicted offenders by separating the offender's identity and criminal record from the genetic information kept by the NDDB. The *DNA Identification Act* also requires that the biological samples collected from convicted offenders and the resulting DNA profiles be used for the purposes specifically prescribed in the Act.

### **THE NATIONAL DNA DATA BANK AT WORK**

The full proclamation of Bills C-13 and C-18 has led to a dramatic increase in the number of convicted offender samples received by the NDDB. During the previous six fiscal years, the NDDB received on average, 19,050 convicted offender samples annually. During the 2008-2009 fiscal year, with the full proclamation of Bills C-13 and C-18, the NDDB received more than 34,000 samples.

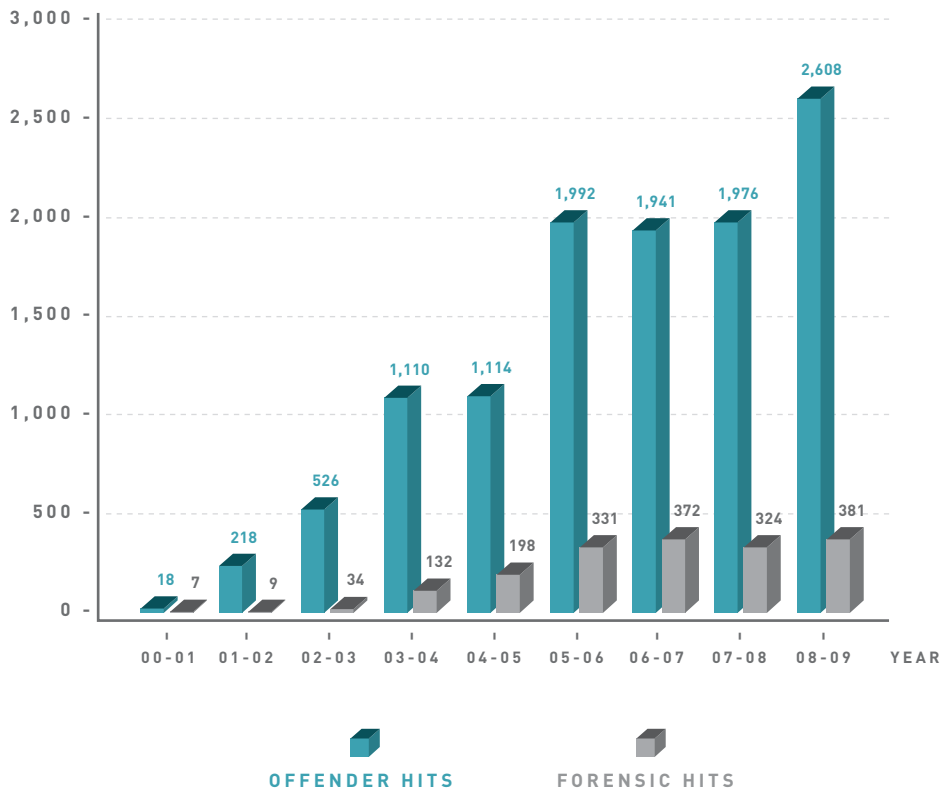
As the number of DNA profiles contained in the NDDB has increased over the past nine years, so has the number of cases assisted by linking crime scene DNA profiles to convicted offenders. The cases assisted range from break and enter to some very complex, high-profile murder and sexual assault cold cases.

A cold case more than nine years old was solved using forensic DNA technology in 2001. It involved the murder and sexual assault of a 63-year-old woman whose body was discovered in her apartment in 1991. In the intervening nine years, Peel Regional Police Homicide Investigators interviewed thousands of suspects. Hundreds of blood samples were tested and more than 120 DNA profiles from suspects were compared to the crime scene evidence by the Centre of Forensic Sciences in Toronto without a match. On November 28, 2000, the crime scene DNA profile was added to the Crime Scene Index of the NDDDB but it was not until the DNA profile from a convicted offender was added to the Convicted Offenders Index on May 4, 2001, that a match was made. The suspect was identified, charged and found guilty of first degree murder on June 3, 2004. The investigative lead provided by the NDDDB demonstrates that the pursuit of justice has no boundaries, even over time.

**INTERESTING FACTS**

As of March 31, 2009, there were 158,493 DNA profiles from convicted offenders in the COI and 48,268 profiles from crime scene evidence in the CSI. Comparison of these DNA profiles has led to 11,503 matches between offenders and crime scene samples (referred to as Offender Hits) and another 1,788 matches between crime scene samples (referred to as Forensic Hits). The most prolific offender was associated to 47 crime scene DNA profiles while the oldest case in the CSI dates back to 1964. The oldest case assisted by an Offender Hit was linked to a 1981 murder from Alberta. The first Forensic Hit occurred on November 10, 2000 while the first Offender Hit occurred on December 1, 2000.

**OFFENDER AND FORENSIC HITS**



DATA OBTAINED FROM PREVIOUS ANNUAL REPORTS.

Since full proclamation of Bills C-13 and C-18, convicted offender samples collected for new secondary designated offences have provided leads in the investigation of more serious offences.

For example:

- ▶ 4,804 samples collected following a conviction for a *Controlled Drug and Substance Act* offence provided assistance with the investigation of 10 murders, four attempted murders, six sexual assaults, three assaults with weapon, two aggravated assaults and 11 robberies;
- ▶ 2,088 samples collected following a conviction for “Escape and Being at Large without Excuse” provided assistance with the investigation of four murders, one attempted murder, five sexual assaults and seven robberies;
- ▶ 2,602 samples collected following a conviction for “Uttering Threats” provided assistance with the investigation of four murders, four sexual assaults, one aggravated assault, one intimidation of a justice system participant or journalist and three robberies; and
- ▶ 814 samples collected following a conviction for “Criminal Harassment” provided assistance with one murder and four sexual assault investigations.

#### INTERNATIONAL PARTICIPATION

The *DNA Identification Act* permits the NDDDB to exchange DNA information for the purpose of criminal investigations with any country that complies with an International Agreement with Canada. In May 2002, such an agreement was signed between INTERPOL and Canada giving the NDDDB access to the 187 countries participating in INTERPOL.

Within the first few weeks of the agreement being signed, a request was received from the New York City Chief Medical Examiner’s Office to compare a DNA profile from a series of sexual assaults in New York to the profiles contained in the NDDDB indices. The search provided a match between the New York cases and an unsolved sexual assault case in the province of Québec.

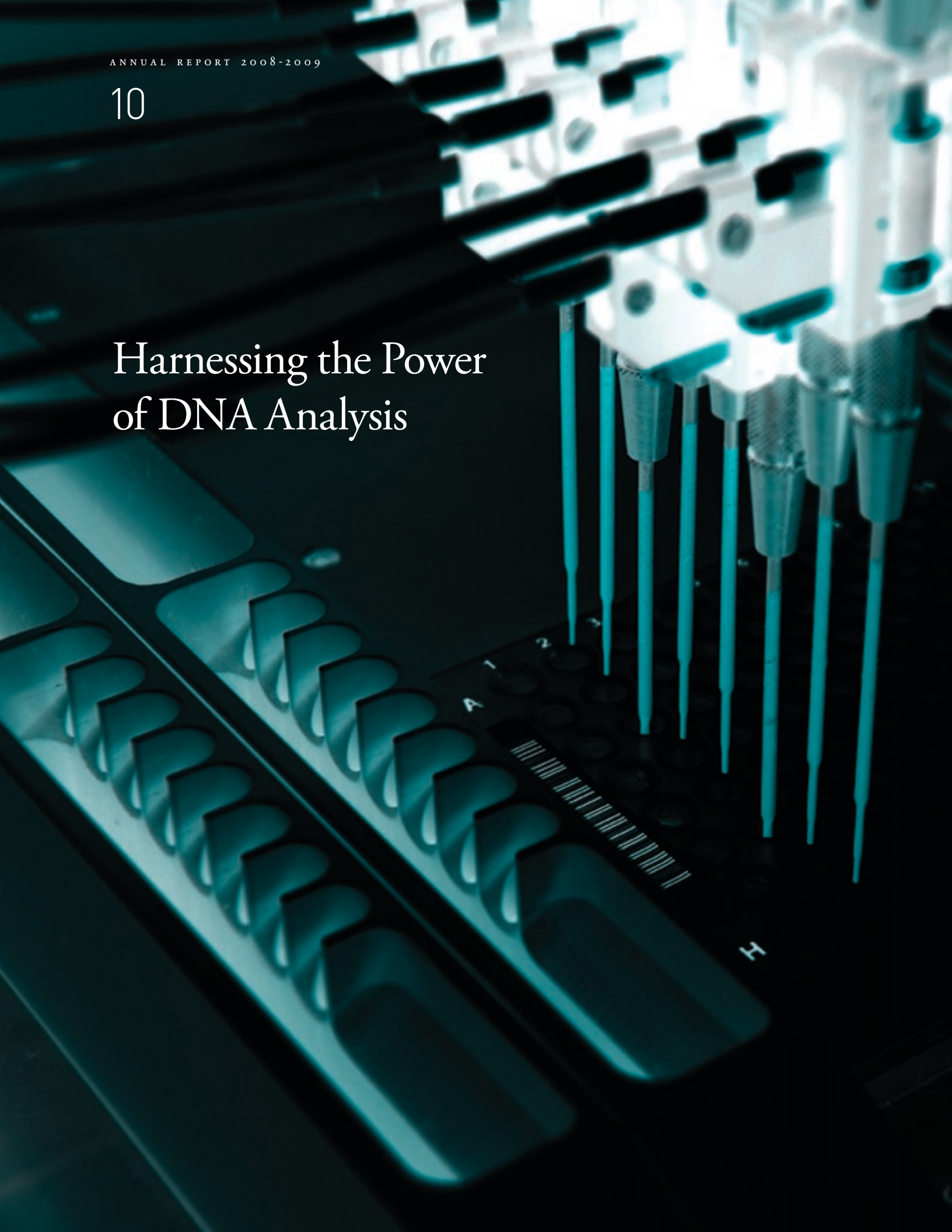
As of March 31, 2009, the NDDDB has received 481 international requests to search its indices (COI and CSI) which resulted in one Offender Hit and one Forensic Hit. Most of these requests originated from Canada’s southern neighbour, the United States, followed by the United Kingdom, France, Portugal and Switzerland. The NDDDB has sent out 100 international search requests which resulted in one Offender Hit and one Forensic Hit.

It is important to note that the NDDDB does not send biological material or DNA from crime scene samples or from convicted offenders to any country as part of the international DNA sharing agreement with INTERPOL. These comparisons only involve anonymous DNA profiles from crime scenes and the request must be made by a Canadian law enforcement agency engaged in a criminal investigation.

#### THE FUTURE

The future of the NDDDB is very promising. With the successes of the NDDDB, its management remains committed to ensuring that its infrastructure and expertise maintains the capacity to provide timely and quality services. In order to fulfill its mandate to support Canadian law enforcement and enhance public safety, the NDDDB must continue to evaluate new technologies and to further improve its operations. Future technology changes must be balanced by practical considerations such as benefit over current protocols, training, the impact on information sharing, and whether comparison with existing DNA profiles within its indices is possible.

# Harnessing the Power of DNA Analysis



DNA analysis was first used by the RCMP in 1989 in an investigation in which a suspect denied any involvement in a sexual assault, but the victim identified him as the attacker. DNA analysis later confirmed the victim's version of events. After the DNA test results were presented in court, the suspect reversed his plea to guilty.

At this early stage, there was no central coordination at the national level that could help police take full advantage of the unfolding advances in DNA technology. In 1995, the Canadian *Criminal Code* was amended to add DNA warrant provisions. Under these provisions, a provincial court judge could authorize the collection of a DNA sample from a suspect for the purpose of forensic DNA analysis in the course of the police investigation of a designated *Criminal Code* offence.

In order for this new tool to be used to its full potential, there was a need to coordinate DNA profiling data from investigations across the country. With support from all levels of government, the general public and police agencies throughout Canada, decisive steps were taken to create the National DNA Data Bank.

In 1996, the Department of the Solicitor General (as it was then known) and the Department of Justice undertook Canada-wide consultations regarding the establishment of a national DNA data bank.

The following groups participated in the consultations:

- ▶ Provinces and territories
- ▶ Police associations
- ▶ Privacy officials
- ▶ Bar associations
- ▶ Victim advocates
- ▶ Women's groups
- ▶ Correctional officials
- ▶ Medical and scientific organizations

Confirming the Government of Canada's commitment to combat crime and especially violent crime, Bill C-3, the *DNA Identification Act* (S.C. 1998 c.37) received Royal Assent on December 10, 1998 and was proclaimed on June 30, 2000.

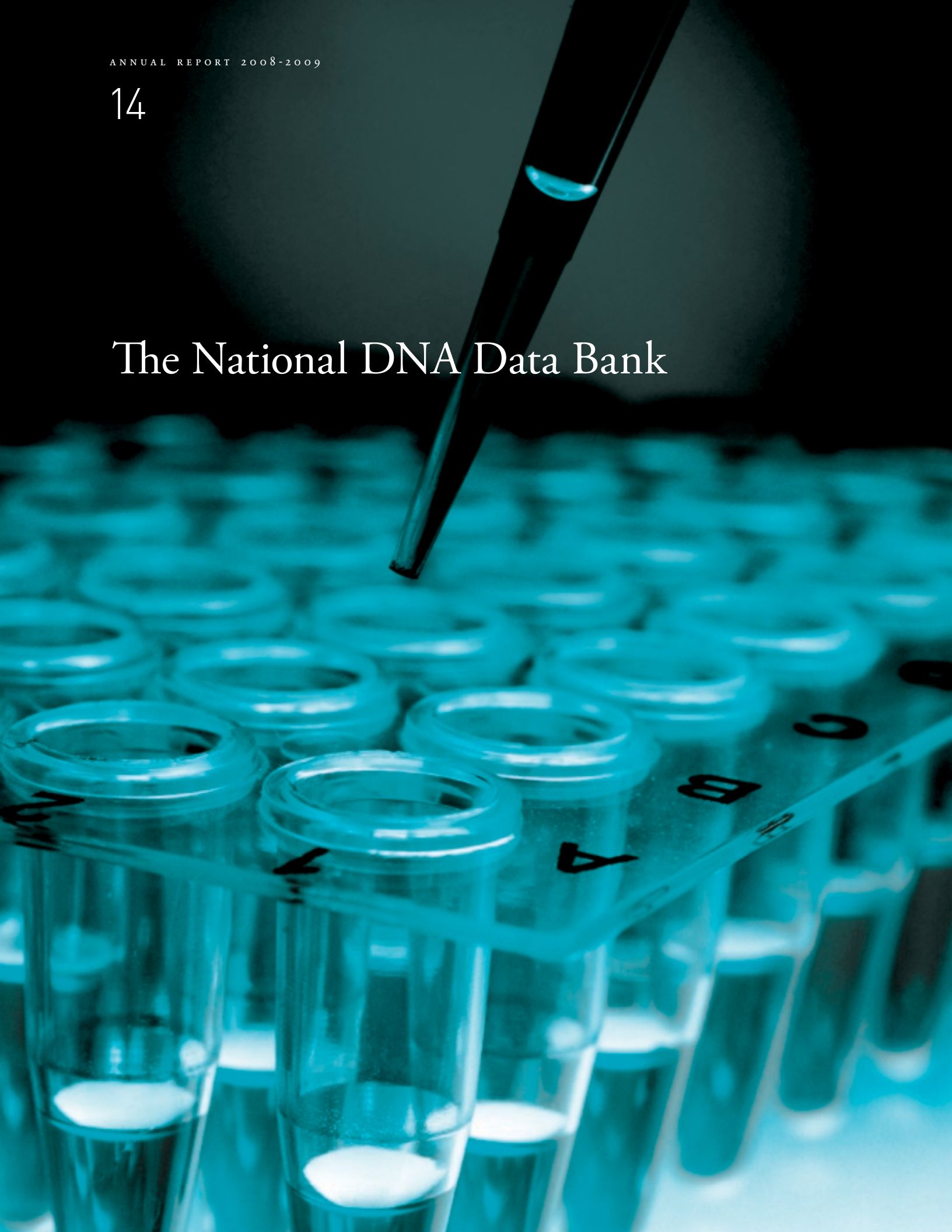
That same year, Parliament enacted Bill S-10, *An Act to Amend the National Defence Act, the DNA Identification Act and the Criminal Code* (S.C. 2000, c.10). The RCMP then built the NDDB after Bill C-3 received Royal Assent. The project was completed on time and under budget and the National DNA Data Bank became operational on June 30, 2000.

History  
of DNA  
Legislation  
in Canada



1989		First RCMP DNA case.
1995	JULY	Bill C-104 receives Royal Assent. The bill amends the <i>Criminal Code</i> and the <i>Young Offenders Act</i> to enable judges to issue a warrant allowing police to obtain DNA evidence from suspects in criminal investigations. This is Phase I of the Government of Canada's DNA Strategy which provided the legislative framework for the use of DNA evidence in criminal proceedings.
	AUGUST	The Canadian Association of Chiefs of Police (CACPP) joins hundreds of organizations across the country in urging the government to create a National DNA Data Bank.
1996	JANUARY	Phase II of the Government of Canada's DNA Strategy begins with nation-wide consultations for the establishment of a National DNA Data Bank.
1997	APRIL	Bill C-94 receives first reading and dies on the Order Paper.
	SEPTEMBER	Bill C-94 is re-introduced in the House of Commons under the number C-3 on September 25, 1997.
1998	SEPTEMBER	Bill C-3 receives third reading.
	DECEMBER	Bill C-3 (Statutes of Canada 1998, c.37) receives Royal Assent. Work begins with an aggressive 18 month schedule to establish the NDDB.
1999	NOVEMBER	Bill S-10 is tabled in the Senate. Based on Senate recommendations, the bill contains amendments to Bill C-3 including: the taking of fingerprints for identification purposes, the inclusion of offenders convicted of designated offences in the military justice system, and a full legislative review of the DNA legislation and NDDB to be conducted by the Senate and House of Commons after five years.
2000	MAY	Bill C-3 receives Royal Assent and allows for the establishment of the DNA Data Bank Advisory Committee by passage of Regulations.
	JUNE	Full proclamation of Bills C-3 and S-10. DNA sample collections are expected to commence immediately following proclamation.
2005	MAY	Royal Assent to Bill C-13 (Statutes of Canada, 2005, c.25). Amendments to expand the retroactive scheme; to clarify the NDDB DNA profile sharing procedures with forensic laboratories; and to establish procedures to confirm the validity of DNA Data Bank orders come into force on Royal Assent. Other provisions of the Bill will come into force on proclamation.
2007	JUNE	Royal Assent to Bill C-18 (Statutes of Canada 2007, c.22). Amendments to facilitate the implementation of Bill C-13, and: <ul style="list-style-type: none"> <li>▶ further expand the retroactive scheme to include attempted murder and conspiracy, and replace the two year serving of sentence requirement with serving on date of the application is serving a sentence of imprisonment for that offence;</li> <li>▶ allow for DNA Data Bank orders to be made within 90 days after the person is sentenced or found not criminally responsible on account of mental disorder;</li> <li>▶ allow a person to be summoned for the execution of a DNA Data Bank order and penalties for failure to appear;</li> <li>▶ clarify international NDDB DNA profile sharing procedures; and</li> <li>▶ clarify destruction procedures for defective orders.</li> </ul>
2008	JANUARY	Full proclamation of Bills C-13 and C-18.
2009	FEBRUARY	Start of the Parliamentary Statutory Review of the DNA legislation and NDDB by the House of Commons Standing Committee on Public Safety and National Security.
	MARCH	Start of the Parliamentary Statutory Review of the DNA legislation and NDDB by the Senate Standing Committee on Legal and Constitutional Affairs.

# The National DNA Data Bank





The RCMP, through its Policing Support Services, 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.

The NDDB assists law enforcement agencies in solving crime by:

- ▶ 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 improves the administration of justice by assisting in the early identification of those who commit serious crimes, and by focusing investigations to eliminate suspects. Robotic technology, coupled with a sophisticated Sample Tracking and Control System™ (STaCS™), allows NDDB analysts to rapidly process samples in a cost effective way, while ensuring overall data security and providing quality control throughout the DNA analytical process.

The NDDB strictly adheres to the privacy principles contained within the *DNA Identification Act* while balancing 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.

Information collected by the NDDB is used solely for law enforcement purposes. In fact, the DNA profiles are considered anonymous pieces of DNA and, apart from gender, do not specify any medical or physical information about the donor.

Biological samples collected from convicted offenders are processed by the NDDB and the resulting DNA profiles are entered into the Convicted Offenders Index (COI). As of March 31, 2009, the COI contained 158,493 DNA profiles.

The NDDB is also the custodian of the Crime Scene Index (CSI), a separate electronic database comprising DNA profiles obtained from crime scene evidence. Crime scene samples are analyzed and DNA profiles are uploaded into the NDDB by the three Canadian forensic laboratory systems. As of March 31, 2009, the CSI contained 48,268 DNA profiles.

The NDDB's three forensic laboratory partners in Canada are:

- ▶ The RCMP Forensic Science and Identification Services (with sites in Halifax, Ottawa, Winnipeg, Regina, Edmonton and Vancouver);
- ▶ The Centre of Forensic Sciences in Toronto and Sault Ste. Marie; and
- ▶ Laboratoire de sciences judiciaires et de médecine légale in Montréal.

Possible matches are identified in one of two ways:

- ▶ New DNA profiles entered in the CSI are compared against DNA profiles from other crime scenes. These matches identify potential links between different crimes which helps investigators to look for other commonalities that may assist with solving the crimes.
- ▶ Comparison of new crime scene or convicted offender entries to associate an offender with a particular crime.

In 2008/2009, the NDDB identified 381 crime scene to crime scene matches, and 2,608 crime scene to convicted offender matches, bringing the total hits for this fiscal year to 2,989.

# The Working Science



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

#### THE CONVICTED OFFENDERS INDEX

The Convicted Offenders Index is the electronic DNA profile database developed from biological samples collected from:

1. Offenders convicted of designated primary and secondary offences (see Appendix A) identified in section 487.04 of Canada's *Criminal Code*, and
2. 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 on page 23 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 investigative procedures described in subsection 487.056(6) of *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 investigative procedures.

These biological samples include:

- ▶ **Blood:** The sample is obtained by using a sterile lancet to prick the fingertip and bloodstains are then collected on a specially prepared sample card.
- ▶ **Buccal:** The inside of the mouth is rubbed with a foam applicator to obtain skin cells that are then transferred to a specially prepared sample card.
- ▶ **Hair:** Six to eight hairs are pulled out with the root sheath attached which are then placed on a specially prepared sample card.

Convicted offender biological samples are collected and submitted to the NDDB to be processed into DNA profiles. These 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 provided to the NDDB at no cost. The software is a universally accepted standard for forensic laboratories, which allows the NDDB to participate in the sharing of information through an international agreement with INTERPOL, approved by the Government of Canada which limits its use to the investigation and prosecution of a criminal offence.

### THE CRIME SCENE INDEX

The Crime Scene Index is a separate electronic database composed of DNA profiles obtained from crime scene investigations of the same designated offences as the Convicted Offenders Index. Exhibits containing biological evidence are collected by investigators and submitted to one of the three forensic laboratory systems (RCMP Forensic Science and Identification Services, Laboratoire de sciences judiciaires et de médecine légale, and the Centre of Forensic Sciences).

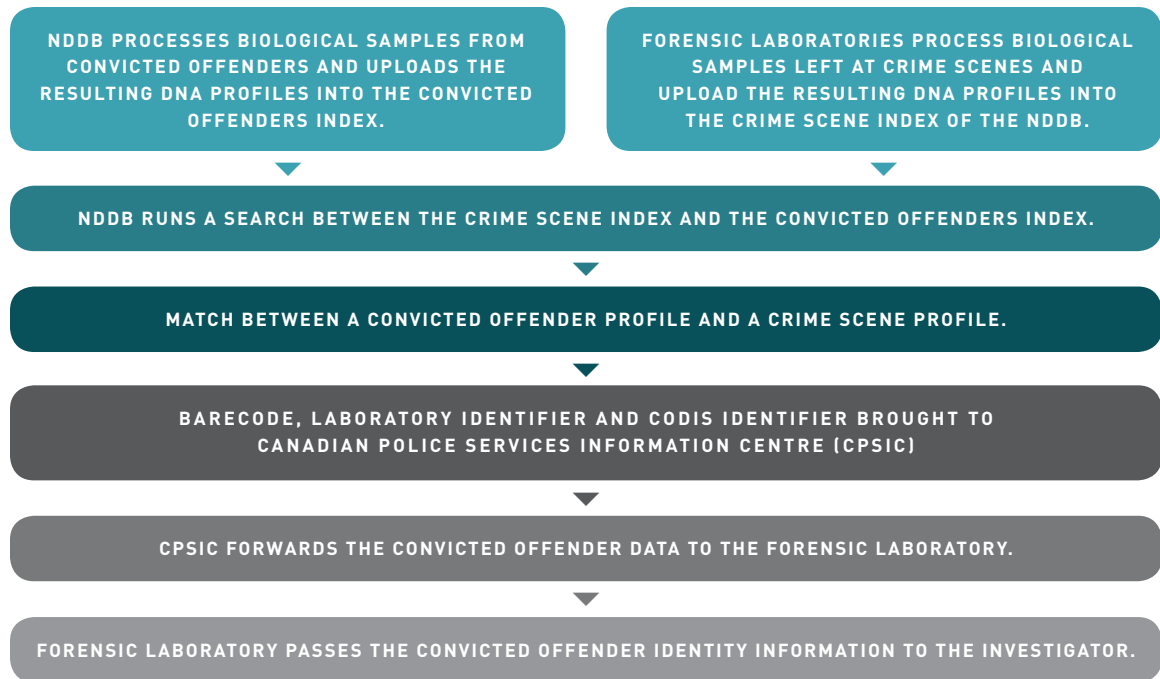
Information from the resulting DNA profiles is uploaded into the Crime Scene Index by the forensic laboratories. The NDDB retains this electronic information as well as basic details such as the date, location of the submitting laboratory and a unique number identifier that allows information to be compared by the submitting laboratory in the event of a future match.

### PRIVACY OF INFORMATION

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 number identifier. In fact, the donor identity of a convicted offender is separated from the genetic information when the 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 (CCRTIS).

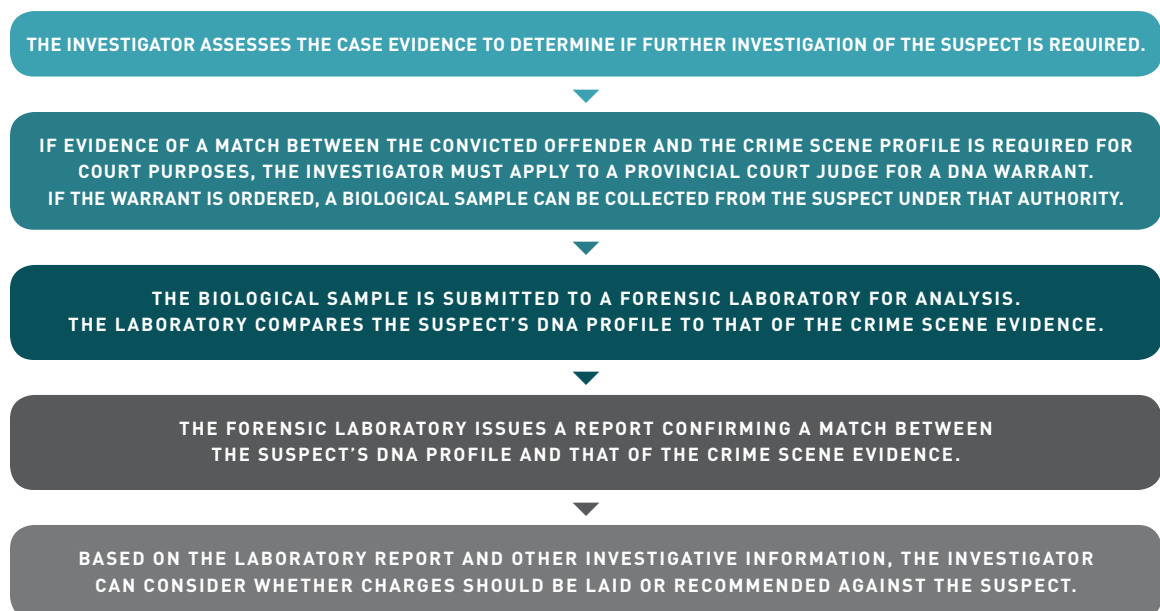
*The DNA Identification Act* makes it clear that the NDDB profiles can only be used for law enforcement purposes. The NDDB does not share the DNA profiles with anyone other than law enforcement agencies. The DNA profiles are the result of 13 specific DNA markers that are tested to produce a DNA profile which is unique to each individual (with the exception of identical twins). These 13 regions of interest are considered anonymous, and other than gender, do not provide specific medical or physical information about the donor. The 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.

## Process for Reporting a Match



## Process for Confirming a Match

Once the investigator has received the convicted offender's identity from the forensic laboratory, the following procedure is followed to confirm the match.



## National DNA Data Bank Advisory Committee

Experts in their field, members of the National DNA Data Bank Advisory Committee have shown their commitment to the National DNA Data Bank's success since it was created nine years ago. Most of the members have sat on the committee since the National DNA Data Bank's inception in 2000. With diverse backgrounds in areas such as policing, privacy, molecular biological sciences, genetics, medical ethics and the law, committee members provide relevant and informed reports and advice to the Commissioner of the RCMP as part of their mandate.

The NDDDB Advisory Committee was established pursuant to the *DNA Data Bank Advisory Committee Regulations* under the authority of the *DNA Identification Act*. The committee meets two to three times a year and provides a forum for discussing policy and operational activities and reviewing key issues on governance, legislation, risk awareness, training and new technology. This year, members have been involved in the Parliamentary reviews of the National DNA Data Bank and its enabling legislation. Bolstered by the success of the National DNA Data Bank, linking offenders to crime, the reviews are meant to further examine how the Data Bank can continue to be used to enhance public safety and justice for all Canadians.

The Advisory Committee welcomed the opportunity to offer its opinion to the House and Senate committees with respect to several issues, including victim identification, unidentified human remains and the National Missing Person's Index, among others. We look forward to the conclusion of the Parliamentary reviews in coming months and hearing their recommendations on how to achieve greater results.

Recently reappointed as Chairperson for another five-year term, I am delighted to see what the future holds for the ever evolving landscape of DNA collection. The National DNA Data Bank has proven a very effective tool for police agencies across the country. Those of us who have the privilege to sit on the Advisory Committee will continue to watch for new technological advances and trends in the international community to help ensure Canada's National DNA Data Bank remains a valued resource for stakeholders from coast to coast.

### RICHARD BERGMAN

M.S.C., DEPUTY COMMISSIONER (RETIRED), CHAIRPERSON  
NATIONAL DNA DATA BANK ADVISORY COMMITTEE

# National DNA Data Bank Advisory Committee Members

## **RICHARD A. BERGMAN**

M.Sc., D/Commr. (Rtd), Chairperson, former Director of the RCMP Forensic Laboratories and Deputy Commissioner, National Police Services, and Deputy Commissioner, Atlantic Region.

## **CHANTAL BERNIER**

Assistant Commissioner, Office of the Privacy Commissioner of Canada. Ms. Bernier was appointed by Order-in-Council as Assistant Privacy Commissioner (Privacy Act) on December 8, 2008 and was appointed as the newest member of the National DNA Data Bank Advisory Committee in February 2009.

## **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.

## **DR. GEORGE R. CARMODY**

Vice Chairperson, Population Biology Specialist and Adjunct Research Professor of Biology at Carleton University. Dr. Carmody is known nationally and internationally as a regular expert witness in population genetics and statistics as applied to forensic applications.

## **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.

## **THE HONOURABLE PETER CORY**

C.C., C.D., Q.C., retired Justice of the Supreme Court of Canada. The Honourable Peter Cory is currently Special Advisor to the Federal Department of Justice. He conducts arbitration and mediation work at the Osler ADR Centre and is Chancellor Emeritus of York University.

## **RAYMOND D'AOUST**

Assistant Commissioner, Office of the Privacy Commissioner of Canada. Mr. D'Aoust represented the Office of the Privacy Commissioner and served on the Advisory Committee from December 2003 until September 2008.

## **DR. WILLIAM S. DAVIDSON**

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, National Services and Research, Forensic Science and Identification Services, RCMP. Dr. Fourney is a Molecular Genetics Specialist and founding member of the RCMP DNA program. He has been instrumental in the development and implementation of forensic DNA typing for Canada.

## Key Statistics – MARCH 31, 2009

**TABLE 1 — CASES ASSISTED BY THE NDDB**

Breaking and Entering with Intent, Committing an Offence, or Breaking Out	6,479
Sexual Offence	1,540
Robbery	1,342
Assault	806
Homicide	730
Attempted Murder	279
Other	327
<b>TOTAL</b>	<b>11,503</b>

**TABLE 2 — MATCH INVENTORY REPORT**

Offender Hit (Crime Scene Index to Convicted Offenders Index)	11,503
Forensic Hit (Crime Scene Index to Crime Scene Index)	1,788
Offender Duplicate (Two samples taken from the same person)	5,757
Identical DNA Profiles (from different individuals i.e. identical twins)	90

### EXPLANATORY NOTES

**Offender “Hit”:** A DNA profile developed from crime scene evidence and entered in 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.

**International Participation:** As of March 31, 2009, the NDDB has received 481 incoming international requests to search its indices (COI and CSI) which resulted in one Offender Hit and one Forensic Hit. The NDDB has sent out 100 outgoing search requests which resulted in one Offender Hit and one Forensic Hit.

**TABLE 3 — DNA PROFILES CONTAINED IN THE NDDB**

Convicted Offenders Index	158,493
Crime Scene Index	48,268
<b>TOTAL</b>	<b>206,761</b>

NOTE: The NDDB receives 600-700 convicted offender samples per week.

**TABLE 4 — BREAKDOWN OF PROFILES CONTAINED IN THE CRIME SCENE INDEX**

Centre of Forensic Sciences (Toronto and Sault Ste. Marie)	18,930
Laboratoire de sciences judiciaires et de médecine légale (Montréal)	15,674
RCMP Forensic Science and Identification Services (Halifax, Ottawa, Winnipeg, Regina, Edmonton, Vancouver)	13,664
<b>TOTAL</b>	<b>48,268</b>

NOTE: The Annual Report for 2007-2008 should have stated that the Crime Scene Index contained 16,440 DNA profiles from the Centre of Forensic Sciences and 13,115 from the Laboratoire de sciences judiciaires et médecine légale.

### EXPLANATORY NOTES

**Convicted Offenders 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 5 — BREAKDOWN OF CONVICTED OFFENDER SAMPLES RECEIVED ACCORDING TO CATEGORY AND OFFENCE TYPE

DNA Data Bank Orders	166,586	Primary	90,014
Retroactive Authorizations	4,417	Secondary	79,514
TOTAL	171,003	Other	1,475
		TOTAL	171,003

NOTE: The "Other" category includes samples submitted following conviction for a non-designated offence or without a court order.

### EXPLANATORY NOTES

The Convicted Offenders Index is a post-conviction database composed of two categories of samples:

#### 1. DNA Data Bank Orders

Since January 2008, the Retrospective and Prospective category of offenders have been combined and include DNA samples collected from an offender who is 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;
- b. declared a dangerous offender or a dangerous sexual offender under Part XXI of the *Criminal Code*, being chapter C-34 of the Revised Statutes of Canada, 1970, as it read from time to time before January 1, 1988;
- 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, 2009, approximately 6,116 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, 5,097 files were concluded with the remainder being prepared by the Attorneys General for court applications.

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

#### Samples Received versus Profiles Contained in the Convicted Offenders Index

As of March 31, 2009, the NDDB had received 171,003 biological samples, of which 158,493 DNA profiles were contained in the Convicted Offenders Index. The difference of 7.3% can be attributed to rejected samples, duplicate samples, biological samples in the process of being treated and profiles removed from the Convicted Offenders Index because the retention period was expired, the conviction or the order/authorization quashed on appeal.

TABLE 6 — CONVICTED OFFENDER SAMPLES RECEIVED BY PROVINCE

British Columbia	18,984	Nova Scotia	4,276
Alberta	17,655	Prince Edward Island	380
Saskatchewan	7,790	Newfoundland & Labrador	2,524
Manitoba	9,261	Yukon	307
Ontario	76,031	North West Territories	1,071
Quebec	29,525	Nunavut	824
New Brunswick	2,375	TOTAL	171,003

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	168,509
Buccal	2,307
Hair	187
TOTAL	171,003

TABLE 8 — BREAKDOWN OF CONVICTED OFFENDER SAMPLES RECEIVED

Adult Offender	148,890
Young Offender	22,071
Military Offender	42
TOTAL	171,003

### SAMPLE REJECTIONS

The NDDB has rejected only 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, lack of order and others. More than 55% 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.

The number of samples rejected do not include biological samples submitted without fingerprints. Typically, if the collection officer can confirm the identity of the offender, continuity is established and the sample can be accepted. Since June 30, 2000, the NDDB has received 885 biological samples that did not contain the fingerprint identification on the sample collection card or the fingerprint identification form.

### 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 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 can be rejected. Since June 30, 2000, the NDDB has received 433 samples that were taken under this provision.

TABLE 9 — CONVICTED OFFENDERS INDEX  
BREAKDOWN BY OFFENCE

Assault	99,661
Break and Enter	23,967
Robbery	23,019
Sexual Offence	31,253
Homicide	5,622
Controlled Drugs and Substance Act (CDSA)	4,804
Other	10,821
TOTAL	199,147

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

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

	ADULT	YOUNG PERSON
Conditional discharge	1,578	245
Conviction quashed on appeal	209	13
Absolute discharge	78	16
Duplicate sample (same order)	74	8
No suitable DNA profile obtained	43	6
Order/authorization quashed	19	5
Retention period expired	N/A	573
Other	16	3
TOTAL	2,017	869

N/A: NOT APPLICABLE

**EXPLANATORY NOTES**

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

**Break and Enter** includes break and enter with intent, being unlawfully in 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 in the presence of or by a child, 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 purpose of trafficking, import or export of controlled substance, trafficking and production of substances.

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 11 — ENDORSEMENTS RECEIVED BY PROVINCE

British Columbia	829	Nova Scotia	36
Alberta	439	Prince Edward Island	1
Saskatchewan	106	Newfoundland & Labrador	44
Manitoba	229	Yukon	14
Ontario	4,669	North West Territories	13
Quebec	878	Nunavut	9
New Brunswick	9	TOTAL	7,276

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

TABLE 12 — BREAKDOWN OF ENDORSEMENTS RECEIVED

Adult Offender	6,922
Young Offender	354
Military Offender	0
TOTAL	7,276

TABLE 13 — ENDORSEMENTS BREAKDOWN BY OFFENCE

Assault	4,609
Break and Enter	1,532
Robbery	1,096
Controlled Drugs and Substance Act (CDSA)	622
Sexual Offence	368
Homicide	63
Other	1,417
TOTAL	9,707

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

### ENDORSEMENT REJECTIONS

The NDDDB has rejected only 1.3% of the endorsements it has received to date. Reasons for rejection include: DNA profile from the offender is not contained in the COI, offender convicted of a non-designated offence and others. More than 51% of the endorsements rejected were collected from offenders convicted of non-designated offences and are therefore not eligible for inclusion in the Convicted Offenders Index.

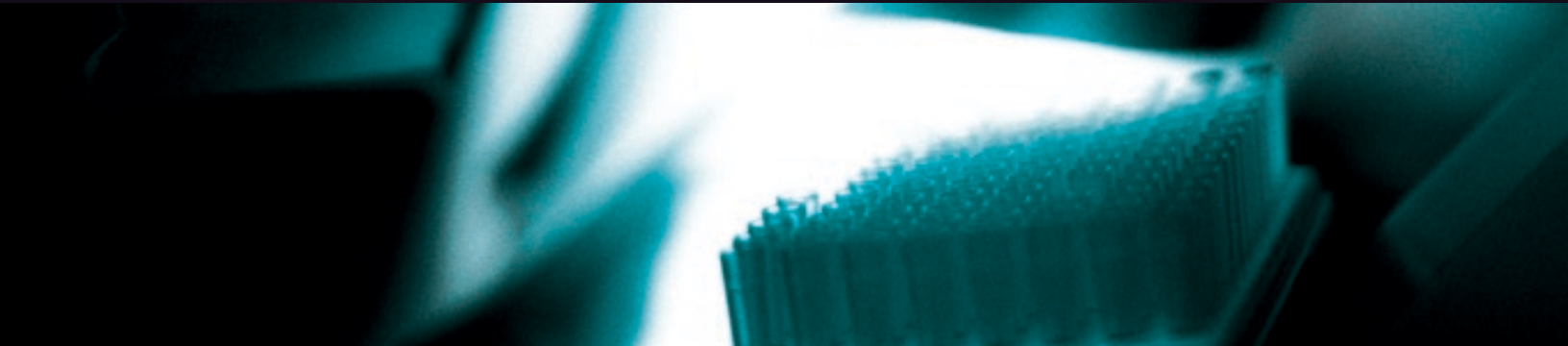
# Financial Statement

APRIL 1, 2008 – MARCH 31, 2009

EXPENDITURE TYPE	EXPENDITURE (\$ THOUSANDS)
Personnel	1,557
Transport and Telecommunications	29
Development and Infrastructure Support	105
Rentals	3
Repair and Maintenance	102
Utilities, Materials and Supplies	892
Capital and Minor Equipment Purchases	32
Miscellaneous	19
SUB-TOTAL	2,739
Indirect Costs <sup>1</sup>	925
TOTAL	3,664

<sup>1</sup> Indirect Costs include: Forensic Science and Identification Services administrative and corporate support, facilities management, Research and Development, recruitment, hiring and training of new personnel, the Quality Assurance Program and the National DNA Data Bank Advisory Committee.

# A Day in the Life of



# National DNA Data Bank



## André Savoie ▶ COLLECTIONS AND TRAINING MANAGER

A 34-year police veteran, including 27 years as a Forensic Identification Specialist, André Savoie is currently acting as the National DNA Data Bank's Collections and Training Manager.

His career as a police officer has provided Savoie with extensive knowledge of the procedures used by the police in the collection of biological evidence at crime scenes and in the court-ordered collection of convicted offender samples. It is dealing with numerous police agencies in relation to the NDDB that Savoie calls the most interesting part of his job.

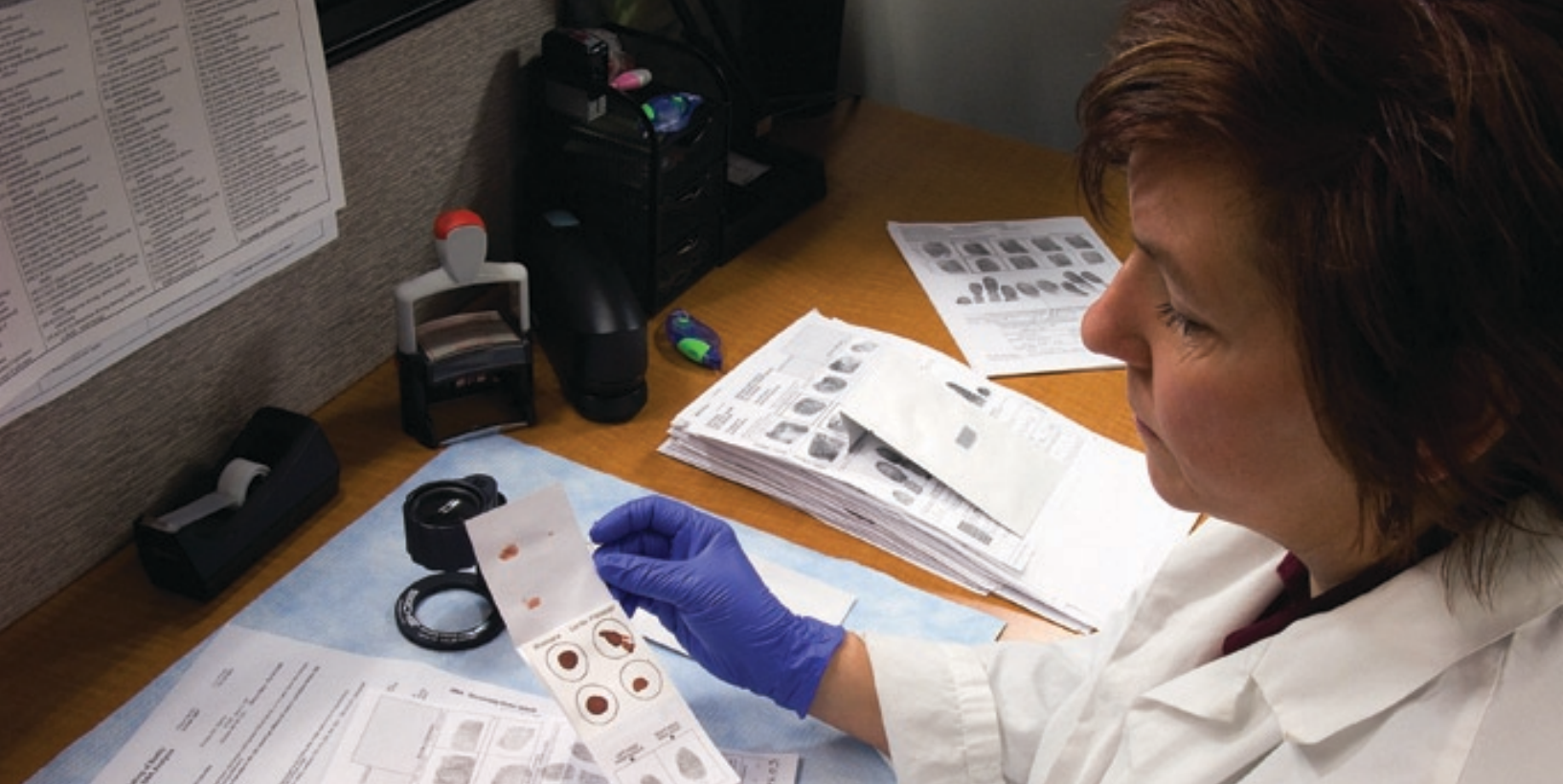
Savoie works as the main NDDB liaison person with Canadian Criminal Real Time Identification Services (CCRTIS), the RCMP unit responsible for maintaining the national repository of criminal records and fingerprints in Canada, as well as with police agencies across Canada. He enjoys his work, meeting with a wide variety of people involved in policing and the Canadian justice system.

Possessed of natural curiosity and a desire to teach and learn, Savoie is responsible for encouraging his staff

to perform their duties with the highest standards. A mentor to younger members, he trains, supervises and provides leadership to the Kit Reception Unit — a team of three DNA Sample Verification Technicians tasked with ensuring that biological samples are accepted or rejected according to established protocols and current legislation.

Savoie travels across Canada delivering training courses to police, ensuring that they have up-to-date knowledge and skills in convicted offender DNA sample collection and the associated authorizing legislation. He also delivers information sessions to court personnel and crown prosecutors.

Savoie, like his colleagues, is quick to say how much he relishes working with a competent and effective team and how proud he is to be part of seeing justice served.



## Hélène Lacombe ▶ DNA SAMPLE VERIFICATION TECHNICIAN

A gloved hand reaches into a Mylar pouch and removes a sample collection card containing the blood and index fingerprints of a convicted offender. No details about the offender, not even the gender, are listed on the collection card. The individual is only identified by a bar code number to protect his or her privacy. A judge has ordered this person's DNA profile be entered into the National DNA Data Bank because they have been convicted of a specific crime.

Today, the gloved hand belongs to Hélène Lacombe. As one of three DNA Sample Verification Technicians in Kit Reception, she ensures that convicted offenders' DNA samples submitted are suitable and that information received is accurate and in accordance with the DNA legislation and regulations. Lacombe also determines whether samples are acceptable for inclusion in the NDDB's Convicted Offenders Index.

Kit Reception Unit, part of the NDDB's Training and Collections Unit, is located at RCMP Headquarters in Ottawa and is the point of entry for every biological sample collected from convicted offenders. Samples along with court orders/authorizations sent to the NDDB, are received from police forces across Canada. The three people tasked with this job in Canada are kept busy with between 600 to 700 samples received each week.

Lacombe is proud to say that she is a member of the NDDB where she has worked since January 2000. She still recalls the feeling of glee when, in July 2000, her

unit received their very first DNA sample to be entered in the Data Bank. "It was from the Sûreté du Québec in Montréal," she said. "It was a very exciting day for everyone."

Communication is an important part of life at the NDDB. "We are in touch with our contributors, police forces across Canada, and the provincial courts on a daily basis," said Lacombe. "If samples are taken incorrectly, we contact the police officers directly. We explain to them how to take a sample properly and answer any questions they have about the collection of the biological sample. We also contact the courts if there are any discrepancies in the legal documents. One of our responsibilities is to ensure that the legal information received with every submission is accurate."

"While changes in the legislation have increased our workload tremendously, I really enjoy what I do. I enjoy helping police officers in any way I can."



## Anne Hale ▶ DNA ANALYST

Anne Hale has been a qualified DNA Analyst and CODIS Administrator with the National DNA Data Bank since its inception in June 2000. Her previous twelve years as a licensed Medical Laboratory Technologist at the Ottawa Hospital and three years at the Public Health Laboratory, enabled her to make a seamless transition into the meticulous world of forensic DNA Analysis.

While she tries to explain her daily work routine in simple terms, she's only somewhat successful, throwing in words like "thermal cycler," "PCR amplification," and most technical of all, "capillary electrophoresis" — which, as Hale explains, is when the DNA is put in a gel to separate the DNA fragments.

As one of a team of ten qualified DNA analysts, Hale is responsible for the timely analysis of convicted offender samples submitted to the NDDB from police agencies across Canada.

The first question is, "Is it like CSI?" said Hale, referring to a question she's asked the most about her job. "We can't generate a DNA profile in an hour," she said with a laugh, adding, "We don't wear stilettos in the lab either."

NDDB DNA Analysts receive biological samples collected from convicted offenders from Kit Reception, and with the help of leading edge robotic technology, and a Sample Tracking and Control System (STaCS™), they purify, amplify and separate DNA fragments and generate DNA profiles in a simplified numerical format. To produce a DNA profile, a small portion of the

biological sample is purified and the DNA is amplified one billion-fold, said Hale.

Once the DNA profiles have been generated, it is also the analyst's responsibility to examine the data, interpret the results and determine the final DNA profile. The confirmed DNA profiles are uploaded to the Convicted Offenders Index of the NDDB. The DNA profiles are searched against unsolved crime scene DNA profiles from across the country. Each upload of about 150 different convicted offender DNA profiles yields an average of 25 to 30 matches, she said. "It's always very exciting to get a match," said Hale, noting, due to strict privacy laws, analysts are not aware of the identity of the offender linked to a crime, only that a link has been made.

Hale says she enjoys working with such an innovative and trustworthy investigative tool that contributes to the administration of justice and the safety of Canadians. She is looking forward to the continued successes of the NDDB, by engaging in the development of new scientific and technological processes to further enhance its operations.





## Pierre Gagnon ▶ QUALITY MANAGER

Pierre Gagnon has been a Civilian Member of the RCMP since 1983, when he joined the organization as a technologist in the former Serology Section of the Halifax forensic laboratory. He transferred to the Ottawa laboratory in 1986 and, in November 1999, Gagnon joined the newly created National DNA Data Bank as the Quality Manager — a very important role in the world of forensic science.

As the NDDB's Quality Manager, Gagnon ensures that the processes and procedures used for DNA analysis of biological samples obtained from convicted offenders strictly adhere to national and international quality assurance standards. He liaises with the Standards Council of Canada on matters concerning formal accreditation of the NDDB, and advises staff of scientific and technical measures required to maintain accreditation status. "When I started as a Quality Manager in 1999, we were not an accredited lab," said Gagnon, who helped the Data Bank achieve accreditation status in March 2004 under the ISO 17025 International Standard.

Gagnon ensures that control samples are available for DNA analysts throughout the week. He also tests

new lots of critical reagents to ensure they pass quality control requirements and can be used for developing DNA profiles from convicted offender biological samples. Control samples and critical reagents include the internal standards and chemicals used in DNA analysis and profile generation. "Basically what I do is I use known samples and test something new," said Gagnon who has used his own DNA hundreds of times to test the reagents.

In addition, Gagnon participates in the development and updating of documents related to the quality assurance program and preparation of the proficiency tests administered to NDDB personnel. He also assesses client service feedback and provides advice to management on client service issues.

## Sylvain Lalonde ▶ NATIONAL CODIS MANAGER

Sylvain Lalonde clearly loves his job. With what he describes as “three careers” spanning 27 years with the RCMP — the first half as a Hair and Fibre examiner, he was also one of the original forensic biologists who introduced forensic DNA analysis to western Canada. He joined the National DNA Data Bank in 2000 as the National CODIS Manager. “I was one of the original guys,” said Lalonde. “We had to train all the new CODIS Administrators and set up all the hardware, software and network prior to June 30, 2000. It was a busy time.”

CODIS is the acronym for the Combined DNA Index System. It is a database program distributed by the Federal Bureau of Investigation and the U.S. Department of Justice to store and search forensic DNA profiles. Outside the United States, more than 41 labs in 33 countries use it. There are 178 CODIS labs in the United States alone and Canada runs the largest CODIS network outside the U.S. Lalonde enjoys the opportunity to meet forensic “databasers” from other laboratories working in different countries.

Upon arriving at his desk each day, Lalonde flicks on his computer and checks on any uploads from forensic labs from the day before. He is responsible for the network that connects all the CODIS computers of the Canadian forensic laboratories and the NDDB. “Within a

week, we get more than 600 DNA profiles from convicted offender samples,” said Lalonde, noting another 80 to 100 crime scene profile samples are also sent in weekly.

Like so many of his colleagues in the NDDB, he finds the best part of his job is the opportunity to work with a fantastic team, both inside and outside the RCMP. One of the many rewards, according to Lalonde, is hearing from investigators how a lead from the NDDB helped solve a case. He has had many special moments in his line of work, including the time he and his colleagues provided the hit that helped identify the man who murdered a young Edmonton girl more than a decade earlier. “We see our success every day. Over 150 hits a week, providing leads for investigators — leads they didn’t have before. It’s a very positive place to work.”



# Success Stories





## DNA Sends Killer to Jail for Life

The man behind the brutal murder of a 92-year-old grandmother would likely have avoided jail time had it not been for DNA evidence collected at the crime scene. "It was the whole case," said Saskatchewan Public Prosecutor Melodi Kujawa, referring to DNA samples taken from several items found following the 1999 murder of the Saskatoon woman. "There was no other evidence but the DNA."

In July 1999, the elderly woman was the victim of a sexual assault and fatal stabbing. When her grandson found her, the home was flooded as a result of water taps being turned on and her phone was off the hook. She was lying on the floor of her living room with fatal knife wounds to the chest and throat.

Although DNA evidence presented at the trial led to a 35-year-old man being convicted and given a life sentence with no parole eligibility for 25 years, the police investigation was not without its hurdles. Evidence collected from clothing and a knife contained traces of DNA. From the knife, the forensic laboratory obtained a mixed profile made up of DNA from both a male and a female. The mixed profile indicated a major and a minor contributor, with the major profile matching that of the deceased. However, they couldn't ascribe a complete profile from the minor contributor, said Kujawa.

As for clothing evidence, which was found under a garbage bag in the home, no DNA profile was generated

at the time, she said. This clothing was later re-examined by the forensic laboratory and additional samples were taken for testing. "This time the analysts were able to do a large scale extraction," said Kujawa. The sample generated a DNA profile from a single male donor. Police had the DNA profile they needed but it matched none of the persons of interest in the case. The DNA profile was entered in the Crime Scene Index of the NDDB but no match was obtained.

The case was cold for seven years until a man was convicted of assaulting an 11-year-old girl in Prince Albert, in northern Saskatchewan. At the end of the assault trial, the man was handed a nine-month conditional sentence and ordered to provide a DNA sample for entry in the NDDB's Convicted Offenders Index. His DNA matched the samples taken from the evidence seized at the elderly woman's home following the 1999 slaying. Armed with new evidence, police obtained a warrant and arrested their suspect in September 2006.

Nearly two years later, he was found guilty of first-degree murder. "This is one of the most serious charges in the *Criminal Code* and there is no higher sentence in Canada, so, from a legal perspective, this is a success story," said Kujawa. "But for the crucial decision made by the police to send the clothing back to the laboratory, this case would never have been solved."



## Blood Left at Crime Scene Puts Church Robber behind Bars

Never in his nearly 35-year police career had Grey County Detective Sergeant Len Johnston of the Ontario Provincial Police come across a repeat burglar quite like this one. And had it not been for a small amount of blood found on a broken window at one of the hundreds of break-ins investigated over the span of several years, a Barrie man may never have been convicted of the crimes.

"We got him on a DNA hit," said Johnston, noting the prolific thief targeted more than 300 churches and community centres throughout Ontario and once made off with upwards of \$12,000 from one robbery. "It made the case."

The DNA profile obtained from the blood sample which was found following the break and enter in Grey County, Ontario in March 2008, was entered into the Crime Scene Index of the NDDB. It matched the DNA profile of a man that had been ordered to submit a sample to the Convicted Offenders Index following a separate conviction in 2000. Police had what they needed to charge a 49-year-old Barrie man in May 2008 in connection with the rash of thefts. In June he pleaded guilty to 279 criminal offences, dating back seven years. He is now serving a six-year sentence.

The charges related to break and enters and thefts that occurred in the OPP's West, Northeast, East and

Central Regions as well as areas policed by the Belleville, Durham Regional, Halton Regional, Oxford Community, South Simcoe, Waterloo Regional, York Regional and Port Hope Police Services.

Prior to the man's arrest, police in southwestern Ontario kept a close eye on churches, some of which had been burglarized more than once. "He'd go into the churches and look for stashes of cash," said Johnston, who was one of several investigators that received an OPP provincial accolade award for his involvement in solving the case. "He did a safe at one place. It was money he was after." The suspect's arrest was the culmination of an intensive multi-jurisdictional investigation by the OPP, the West Grey, the Hanover and the Wingham Police Services that began in January 2008.

Provincial DNA Coordinator Detective Sergeant Mike Bussieres called the outcome of this case "extremely rewarding and satisfying." "He was committing multiple B&E's wherever he lived and he lived everywhere in the province," said Bussieres.

Johnston said the successful arrest and conviction is proof of the effectiveness of the NDDB. "The DNA Data Bank is just a very good tool," he said. "As the number of DNA profiles contained in the DNA Data Bank increases, there will be more and more hits."

## Fingernail Scraping Helps Nail Down Jogger's Attacker

A woman dragged from a popular Thunder Bay trail into the bushes and sexually assaulted saw justice served 16 years after she was attacked. The then 29-year-old woman's ordeal began on a Thursday morning in September 1992, when she was out jogging. Shortly after 10 a.m., she was grabbed from behind and dragged into a wooded area off the trail that weaves around Boulevard Lake, in the north end of the city.

She fought back and managed to scratch her attacker's neck, drawing blood. Undeterred, the assailant got on top of her, threatened to kill her and choked her until she fell unconscious. The man fled the scene before she regained consciousness. When she awoke, more than half an hour had passed. She made her way to a nearby street, where a motorist stopped to help. She went home and later went to hospital.

The subsequent police investigation failed to produce a primary suspect. Despite limited technology available at the time, Thunder Bay Police's Forensic Identification Section preserved a sample of the skin from under the woman's fingernail and stored it as evidence for possible future examinations. In 1999, as a result of advances in forensic DNA technology, Thunder Bay Police resubmitted the fingernail scrapings from the woman's right hand to the Centre of Forensic Science's

Northern Regional Forensic Laboratory. A complete DNA profile was developed and entered into the Crime Scene Index of the NDDB.

"It was a classic whodunit case," said Thunder Bay Police Detective Inspector Dan Taddeo, of the force's Criminal Investigations Branch. Investigators cast their net as wide as possible, checking for potential suspects in hostels, motels, hotels and criminals just released from jail, he said. "It included every investigative technique at that time."

Another seven years passed until investigators finally got the break they needed. In June 2006, Thunder Bay Police were notified by the NDDB that the DNA from the fingernail scrapings matched a convicted offender whose DNA had been submitted to the NDDB.

The offender was arrested in October 2006 in the greater Sudbury area. During the trial, a forensic scientist indicated that the estimated probability of an unrelated individual having a matching DNA profile would be one in 950 billion. In 2008, 16 years after the assault, the offender plead guilty and received a three-year prison sentence — two years for choking, an additional one year consecutive for assault causing bodily harm and one year concurrent for uttering death threats. "Without DNA this would still be an unsolved case," said Taddeo.





## Stored DNA Nets Rapist a 13-Year Sentence

Asleep in her friend's living room, a seven-year-old Edmonton girl was abducted, sexually assaulted and left alone half naked in a dark alley. More than a decade later, the man responsible for the crime was sentenced to 13 years in jail for kidnapping, unlawful confinement and aggravated sexual assault in connection with the attack that dated back to August 1995.

If not for the DNA evidence collected after the disturbing crime, it would likely have gone unsolved, said Crown prosecutor Avril Herron. "This case was investigated 100 ways sideways," said Herron. "We never would have found the offender without the DNA."

The offence dates back to 1995, when a 19-year-old man broke into the friend's home through a back door. He grabbed the little girl and when she struggled, he clamped a hand over her mouth and carried her to a nearby alley. He threatened to break her neck and sexually assaulted her in the mud before fleeing. Investigators questioned dozens of people, who either had a connection to the little girl or to the home. After several months, the case eventually went cold.

Years later, a retiring police officer who had been involved in the investigation suggested the file be

reopened and evidence sent for forensic DNA testing. Any DNA profiles developed would be entered in the Crime Scene Index of the newly created NDDDB, said Herron. "It was such a noteworthy case," she said. "He felt like it was bugging him."

Investigators hit the jackpot in 2003, when a DNA profile obtained from the bottom of the child's pyjama top and on a handmade quilt matched the DNA profile of a man who had been ordered to submit a sample to the Convicted Offenders Index of the NDDDB following an assault conviction. Police received a blood sample from the suspect and analysts confirmed the match.

The 32-year-old man was charged in 2005 and he pleaded not guilty. During the trial, which wrapped up in October 2008, the jury heard compelling evidence, including taped interviews from the child herself, describing the incident. A forensic scientist testified the odds of a random match to the DNA found on the child's pyjamas were one in 890 billion.

"What this case speaks to is the importance of the National DNA Data Bank," said Herron, a Crown prosecutor for the past seven years. "DNA is a quantifiable source of evidence which can be extremely probative."



## DNA Hit Nabs Home Invasion Suspect

Surrey RCMP credited the NDDB with helping solve a recent violent home invasion.

Two men broke into a woman's home in Surrey B.C., in September 2008 and demanded money and jewelry. One of the men also sexually assaulted the woman, and left a sample of his DNA at the crime scene. "Ultimately, that DNA sample led to a CODIS hit," said Surrey RCMP Major Crime Robbery Section Constable Bill Robinson, referring to the Combined DNA Index System. CODIS is the computer system used by the NDDB to store and search DNA profiles, assisting in the identification of suspects in crimes. A DNA swab, according to Robinson, "was our main form of identifying the suspect."

"Essentially we had no leads until we had that CODIS hit," said Robinson, highlighting the importance of the NDDB. "The suspect was not known to the victim. It just appeared to be a crime of opportunity."

A 32-year-old man from British Columbia's Lower Mainland, who was known to police, was charged less than one month after the attack with sexual assault, break and enter, forcible confinement and robbery. He is awaiting trial.

"With court-ordered DNA and the fact that more and more offenders have to provide their DNA, over the years there will be more people in the Data Bank," said Robinson. "We're getting hits now on files that were three, four and five years old."





## DNA Solves Four-Year-Old Jewelry Store Heist

Donning masks to cover their faces, three men in Windsor, Ontario made off with thousands of dollars worth of goods in a brazen daytime jewelry store robbery in March 2005. The well-planned blitz burglary, which lasted all of 90 seconds, was captured by surveillance cameras. Armed with a handgun, one suspect herded the store's three employees into a back room, while the two other suspects used hammers to smash the glass display counters and stuff jewelry and high-end watches into bags they brought with them.

The trio escaped in a white Ford van that turned out to have been stolen earlier that morning. It was recovered unoccupied elsewhere in the city, 15 minutes after the robbery. A Forensic Identification officer found fresh blood on one of the jewelry display cases. Investigators believed one of the suspects cut himself while smashing the glass counters. The DNA sample was sent to the Centre of Forensic Sciences in Toronto where a DNA profile was developed and stored in the Crime Scene Index of the NDDB. It was the only blood swab from the robbery submitted for DNA analysis.

Despite an insurance company offer of \$10,000 for information, the case stood dormant for four years. Earlier this year, investigators got a break in the case. Windsor Police were notified in January that the crime scene DNA sample sent in 2005 matched a sample

recently provided to the Convicted Offenders Index of the NDDB by a man convicted of an unrelated aggravated assault. "It was very much a surprise," said Windsor Police Forensic Identification Specialist and DNA Coordinator Sergeant Steve Lamarche, referring to the new DNA match on the file.

The newly named suspect was spotted driving in the city and members of the Windsor Emergency Services Unit wasted no time in arresting the individual. The 25-year-old man was subsequently charged with robbery with a weapon, possession of a weapon dangerous to public peace and theft of an automobile. His trial is pending, while the other two suspects involved in the robbery remain at large.

Interestingly, the man whose DNA was found following the robbery had been a suspect at the beginning of the investigation, Lamarche said. The jewelry store owner noticed a suspicious vehicle in the parking lot a week before the robbery and called police. Upon questioning, Lamarche said the man made up a story about why he was there and he was cleared of suspicion.

With police utilizing the NDDB during their investigations, it gives the community assurance that police agencies are using the best possible technology to solve crimes, Lamarche said. "The community shows a lot more confidence in the police," he said.

## Appendix A – DEFINITIONS OF DESIGNATED OFFENCES

### PRIMARY COMPULSORY OFFENCES

This category includes 16 offences for which the court is compelled to make an order such as murder, manslaughter, aggravated sexual assault and robbery. For a complete list of offences that fall under this category, refer to paragraph (a) 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 an 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: sexual assault, breaking and entering a dwelling house and child pornography. For a complete list of offences that fall under this category, refer to paragraph (a.1) 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 prosecutor, make an 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 dwelling-house, assault and indecent acts. For a complete list of offences that fall under this category, refer to paragraphs (c), (d) and (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 an 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 Drug and Substance 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 and 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), (b) and (e)(i) under the definition of “secondary designated offence” in section 487.04 of the *Criminal Code*.

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