NATIONAL DNA DATA BANK ADVISORY COMMITTEE

2017-2018

Annual Report

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Introduction

The National DNA Data Bank (NDDB) was established pursuant to the *DNA Identification Act (DNAIA),* 1998, c.37 and commenced operations in June 2000 under the stewardship of the Royal Canadian Mounted Police (RCMP) on behalf of the Government of Canada. The National DNA Data Bank Advisory Committee (NDDB AC) was created pursuant to the *DNA Data Bank Advisory Committee Regulations;* P.C. 2000-635 May 4, 2000 and functions as an independent body to assist the Commissioner of the RCMP in ensuring the NDDB operates in compliance with legislation and regulations. The Advisory Committee's role is also to provide the NDDB with strategic guidance and direction concerning scientific advancements, matters of law, legislative changes, privacy issues, and ethical practices.

The NDDB operates as a national police service available to all Canadian law enforcement agencies and is a component of Forensic Science and Identification Services (FS&IS) under the Specialized Policing Services (SPS) Business Line of the RCMP. The NDDB contributes to the administration of justice and safety of Canadians by linking crime scenes, by identifying offenders, and by exonerating the innocent.

The NDDB has historically been comprised of two indexes:

- The **Convicted Offenders Index** (COI) is an electronic index that has been developed from DNA profiles collected from offenders convicted of designated primary and secondary offences identified in Section 487.04 of the *Criminal Code of Canada,* which includes certain offences in the *Controlled Drugs and Substances Act;* and,

- The **Crime Scene Index** (CSI) is a separate electronic index composed of DNA profiles developed by Canada's operational forensic laboratories from crime scene investigations of the same designated offences addressed in the *Criminal Code.*

In March 2018, legislative amendments ("Lindsey's Law) to the *DNA Identification Act* and the *DNA Identification Regulations* came into force which created three new humanitarian indexes within the NDDB that extend its services to investigations involving missing persons and unidentified human remains. In addition, two criminal DNA indexes were also added to further support criminal investigations. The role of these five new indexes within the NDDB will be the subject of further comment later in this report.

A snapshot of the activities of the NDDB noted in the table below demonstrates the contribution the NDDB has made to public safety in Canada since its inception.

Quick Facts

<table>
<tr><td rowspan="2">509,528
DNA profiles contained in the NDDB[1]</td><td>365,565
DNA profiles contained in the Convicted Offenders Index</td><td>143,963
DNA profiles contained in the Crime Scene Index</td></tr>
<tr><td>22,267
Convicted Offender Samples Received in 2017/18</td><td>13,863
Increase in Crime Scene Index DNA Profiles in 2017/18</td></tr>
<tr><td>5,751
Investigations Assisted by the NDDB in 2017-18 (Offender and Forensic Hits)</td><td>5,298
Offender Hits (Convicted Offender to Crime Scene) in 2017/18</td><td>453
Forensic Hits (Crime Scene to Crime Scene) in 2017/18</td></tr>
<tr><td>55,275
Investigations assisted by the NDDB since June 30, 2000 (Offender and Forensic Hits)</td><td>49,783
Offender Hits since June 30, 2000</td><td>5,492
Forensic Hits Since June 30, 2000</td></tr>
</table>

[1]If no date range is specified the data refers to the period from June 30, 2000 through March 31, 2018

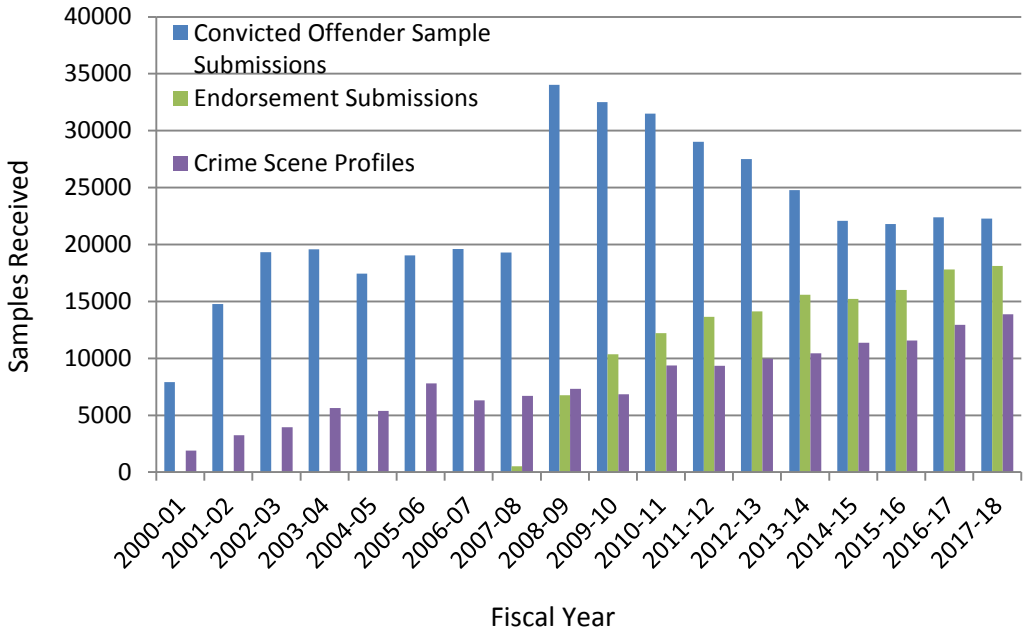
[2]2017/18 refers to the NDDB's fiscal year from April 1, 2017 through March 31, 2018

The NDDB processes two types of convicted offender submissions: biological samples and endorsements. A biological sample submission contains documentation and a biological sample collected from a convicted offender under the authority of a court order. The NDDB uses the biological sample to generate a DNA profile of the offender then enters the profile into the Convicted Offenders Index (COI). An endorsement submission contains documentation only and is sent to the NDDB when the convicted offender's DNA profile is already in the COI. The NDDB also receives DNA profiles from crime scene samples. These profile are developed by public forensic laboratories and entered into the Crime Scene Index (CSI).

As illustrated in the following graph, since 2010 the NDDB receives approximately 40,000 convicted offender submissions (total of biological samples submissions + endorsements submissions) annually. The graph also illustrates the number of DNA profiles developed from crime scene samples that have been entered into the CSI annually.

As of March 31, 2018, the NDDB contained 509,528 DNA profiles which include 365,565 in the Convicted Offender Index and 143,963 in the Crime Scene Index.

Samples Received in the National DNA Data Bank (NDDB)

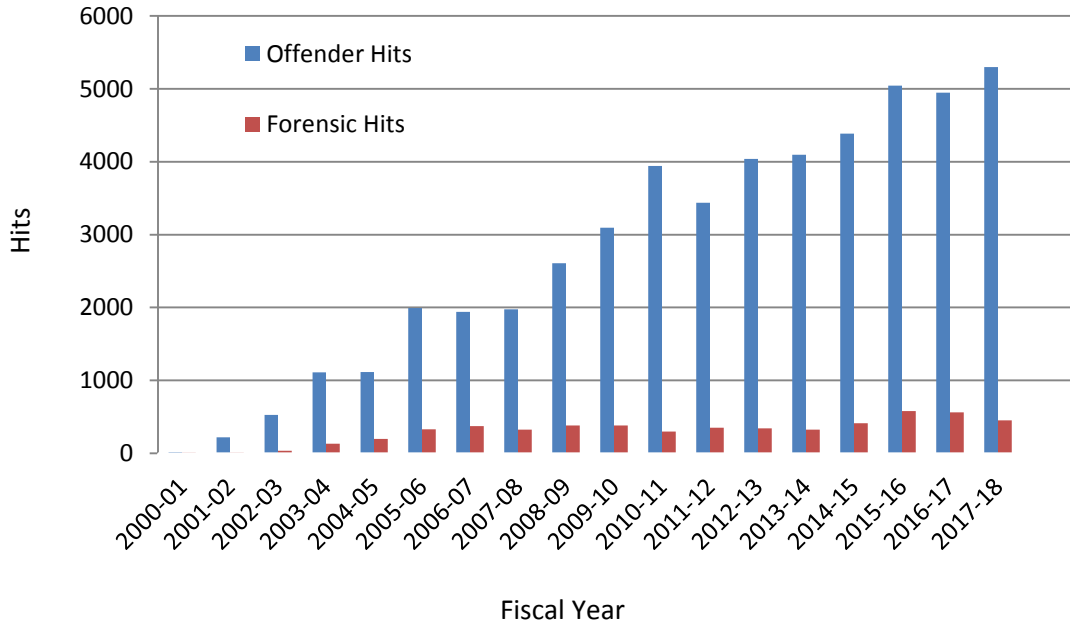


The NDDB assists law enforcement agencies in solving crimes by:

- Linking crimes together where there are no suspects (CSI to CSI match)
- Helping to identify suspects (CSI to COI match and/or CSI to CSI match)
- Eliminating/exonerating suspects (no match between crime scene DNA (CSI) and COI profile in the NDDB)
- Determining whether a serial offender is involved

In the 2017/18 fiscal year, there were 5,298 Offender hits (Convicted Offender to Crime Scene) and 453 Forensic Hits (Crime Scene to Crime Scene) for a total of 5,751 hits that assisted police investigations. Unfortunately, what cannot be measured is the number of suspects that were eliminated or police investigations refocused when no match took place. The overall growth in both Offender and Forensic hits since the NDDB's creation, as shown below, has contributed significantly to public safety over the years.

Growth in Offender and Forensic Hits



Crime scene samples are analyzed and the DNA profiles are uploaded to the NDDB by the three Canadian forensic laboratory systems:

- The RCMP National Forensic Laboratory Services in Ottawa, ON Edmonton, AB and Vancouver, BC
- The Centre of Forensic Sciences (CFS) in Toronto and Sault Ste. Marie, ON; and
- The Laboratoire de sciences judiciaires et de médicine légale (LSJML) in Montréal, QC

With respect to CSI samples, the NDDB retains the electronic DNA profile information as well as basic details such as the upload date, location of the submitting laboratory and a unique identifying number that allows information to be compared by the submitting laboratory in the event of a future match.

Biological samples collected from convicted offenders across Canada are processed by the NDDB and the resulting DNA profiles are entered into the COI. It is important to note that convicted offender samples are identified simply by a bar code number. 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 not available to the NDDB staff and is kept in a separate registry maintained by the RCMP's Canadian Criminal Real Time Identification Services (CCRTIS).

The procedures and policies at the NDDB demonstrate its commitment to scientific rigour and to protecting the privacy rights of individuals as required by the *DNA Identification Act*.

National DNA Data Bank Advisory Committee (NDDB AC)

The National DNA Data Bank Advisory Committee (NDDB AC) was formalized under the authority of the *DNA Data Bank Advisory Committee Regulations.* The Committee members are recommended by the Commissioner of the RCMP and appointed by the Minister of Public Safety for a five year term that can be renewed. There are currently eight members of the Committee who have varied backgrounds including law, science, privacy, law enforcement, human rights, statistics, and ethics. Members of the 2017-2018 Committee are:

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

Gisèle CÔTÉ-HARPER, O.C., Q.C. (Vice-chairperson) Barrister and Emeritus Professor at the Faculty of Law, University of Laval, Sainte-Foy, Québec. Madame Côté-Harper is recognized nationally and internationally as a legal expert on Human Rights issues and is a graduate of Harvard Law School.

Dr. Frederick BIEBER, Associate Professor of Pathology at Harvard University, Boston, Massachusetts. Dr. Bieber is a medical geneticist and specialist in bio-medical ethics. He has an extensive background in genetics research and has been involved in DNA related projects with academic and law enforcement agencies throughout his career.

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 area 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 a founding member of Canada's forensic DNA program. He has been instrumental in the development and implementation of forensic DNA typing for Canada.

Dr. Anjali MAZUMDER, Research Fellow in the Department of Statistics at the Carnegie Mellon University, Pittsburgh, PA. 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. She holds a Doctorate in Statistics from the University of Oxford. Her term expired in December 2017 and a replacement is pending as this report is submitted.

Derrill PREVETT, Q.C. J.D Retired Crown Counsel, Criminal Justice Branch of the British Columbia Ministry of the Attorney General. Mr. Prevett has 37 years legal experience and has prosecuted complex homicide cases where DNA was used as the sole evidence identifying the perpetrators. He also served on national committees where he was responsible for ensuring consistent implementation of DNA legislation and making recommendations to Parliament regarding the NDDB.

Patricia KOSSEIM, Senior General Counsel and Director-General, Legal Services, Policy, Research and Technology Analysis Branch, Office of the Privacy Commissioner of Canada. Ms. Kosseim was responsible for providing strategic legal and policy advice on privacy issues and represented the Privacy Commissioner before courts and Parliamentary Committees. Ms. Kosseim has recently taken on a new position and a replacement as the representative for the Privacy Commissioner will be identified prior to the next Advisory Committee meeting in 2018.

It should be noted that several positions will become vacant on the Advisory Committee in the forthcoming year and research is being conducted to identify potential candidates that possess the criteria outlined in the Terms of Reference for the NDDB Advisory Committee

Contributors to the NDDB AC Meetings

August 28, 2017 Teleconference

Reama Khayat	Royal Canadian Mounted Police
Roland Gosselin	Royal Canadian Mounted Police
Laria Morissette	Royal Canadian Mounted Police
Jeremy DeMan	Royal Canadian Mounted Police
Kevin O'Shea	Royal Canadian Mounted Police

November 30-December 01, 2017 Meeting

A/Commr. Philipe Thibodeau	Royal Canadian Mounted Police
C/Supt. Wade Oldford	Royal Canadian Mounted Police
Jeff Modler	Royal Canadian Mounted Police
Reama Khayat	Royal Canadian Mounted Police

Tony Tessarolo	Centre of Forensic Sciences, Director
Neil Fernandopulle	Centre of Forensic Sciences
Greg Yost	Department of Justice
Kim Henderson	Public Safety Canada
Kathy Murphy	Royal Canadian Mounted Police
Jean Kerwin	Royal Canadian Mounted Police
Jeremy DeMan	Royal Canadian Mounted Police

NDDB AC Report

This report covers the period from April 2017 to March 2018 during which the Advisory Committee met twice. The first meeting was by teleconference on August 28, 2017, and the second meeting took place in person in Ottawa from November 30 to December 01, 2017.

At each meeting, the Advisory Committee was updated on the operations and performance of the NDDB including statistical updates, ongoing activities, initiatives and challenges. The Committee also received updates from the Canadian Scientific Working Group on DNA Analysis Methods (SWGDAM) and the Department of Justice on initiatives and research in their respective areas impacting the NDDB as well as potential legislative amendments which would enhance the effectiveness of the NDDB.

A key focus of the Advisory Committee at each meeting revolved around the National Missing Persons DNA program (NMPDP), which became operational in March 2018 following the passage of legislation, regulations, and development of operational policy related to missing persons and unidentified human remains. The Advisory Committee also benefited from discussions outlining ethical challenges, privacy and consent issues in genetics which have been the subject of debate at our meetings as it relates to missing persons and their families. Evolving technology related to DNA in terms of Rapid Hit DNA and Next Generation Sequencing provided the Committee with insight in to current application and future use of the science as it relates to public safety. The Advisory Committee also revisited progress on familial searching in Canada pursuant to our recommendation in 2015. Additionally, the Committee constantly reviews approaches to enhance the use of DNA in promoting public safety which resulted in a formal recommendation to collect DNA from all individuals convicted of a designated offence.

Key issues and highlights of the presentations and their potential impact on the NDDB are further elaborated in this report.

NDDB AC Meeting Cost

The total expense for the meetings held in fiscal year 2017/2018 was **$15,293.67.**

NDDB Year End Summary

The NDDB Advisory Committee was created under the authority of the *DNA Data Bank Advisory Committee Regulations* eighteen years ago and, since that time, it has closely monitored the operations of the NDDB, provided advice and guidance when and where appropriate, and advanced recommendations to enhance the effectiveness and efficiency of the National DNA Data Bank. The science of DNA and the technology related to its use continues to evolve at an unprecedented pace, and the involvement of Committee members in international forums, conferences, and the knowledge which they impart to the Committee from their own careers continue to enlighten the Advisory Committee as a whole to remain current with the evolving science and related technology.

Members have been invited to present professional papers or facilitate DNA working groups at national and international meetings or conferences and this information is shared with the NDDB AC. Attendance at the Green Mountain DNA Conference in 2017 focused on evolving technologies and applications in the field of DNA which directly impact the knowledge level and awareness of all Advisory Committee members. One of our Committee members was appointed to the United States National Commission on Forensic Science which was created pursuant to a report by the US National Academy of Science to review forensic science practices, policies, and procedures related to the criminal justice system. Participation in forums such as these ensures the Advisory Committee maintains a leading edge approach with respect to international developments in DNA and its application in the field of public safety.

The Advisory Committee has continually emphasized the importance and commitment to training by the NDDB. This ensures that the collection of biological samples from convicted offenders is done professionally and in compliance with accepted standards and legal parameters. It also reduces submission errors which result in rejections and reduced efficiency. In the 2017/18 fiscal year, training was provided in Prince Edward Island, New Brunswick, Alberta, Newfoundland and Labrador, British Columbia, Nova Scotia and there is ongoing training in both Ontario and Quebec. An online training program has also been developed for police personnel to enhance knowledge in DNA collection, and is currently being rolled out.

Since 2014, the Advisory Committee has been closely monitoring the progress being made by the FBI with respect to Rapid DNA (RDNA) research which would involve immediate processing of DNA samples at time of arrest for direct searching with the US national DNA database. In 2017, the Centre of Forensic Sciences (CFS) noted their ongoing research with respect to Rapid DNA which will be closely followed by the Advisory Committee as their research progresses. The CFS also provided an overview of their research as it relates to biogeographic ancestry and its relevance to criminal investigations. While this does not impact the NDDB at this time, it is an area of emerging science that will gain relevance and prominence in the field of criminal investigations and public safety as it progresses. The Committee will continue to monitor the progress on these projects and assess the potential impact from both an efficiency and privacy perspective as it relates to the NDDB.

During the 2017/2018 fiscal year, the NDDB adopted and implemented new processes and technologies that will position it to meet future demands, especially with the passage of legislation which created additional DNA indexes related to missing persons and unidentified human remains investigations.

- **CODIS 7**, a software package that stores and compares profiles and is a universally accepted tool for forensic laboratories has been updated at all three laboratories to improve the exchange of information between the three Canadian forensic laboratory systems and the NDDB.
- **CODIS 8**, the next generation of information sharing and profile comparison supporting new search configurations is currently being reviewed for future implementation.
- **Sample Tracking and Control System DB (STACS™)** servers at the NDDB and at the Edmonton laboratory have been replaced to ensure an appropriate disaster recovery plan is in place to ensure tracking and control of samples is assured should the main STACS™ system at the NDDB experience a failure.

The Scientific Working Group on DNA Analysis Methods (SWGDAM), comprised of scientists from each of the three forensic laboratories in Canada, provided an update at the November/ December meeting on emerging issues and technology enhancements of importance to the DNA community. One area of discussion and procedural development related to processes and technical requirements resulting from the passage of legislation which created three new indexes related to Missing Persons and Unidentified Human Remains and two related to criminal investigations. As a result, Canadian SWGDAM completed a review of the NDDB DNA Acceptance Standards and approved version 2 which addresses the issues arising from the implementation of these indexes.

With the creation of new DNA indexes pursuant to the passage of legislation (Bill C-43) with respect to DNA profiles of missing persons and unidentified human remains, the NDDB prepared an updated Privacy Impact Assessment (PIA). The PIA is in the process of submission to the Office of the Privacy Commissioner.

The Advisory Committee has been updated on the progress of the NDDB as it prepared to implement legislation created by amendments to the *DNA Identification Act (DNAIA)* relating to the expanded use of DNA profiles in Canada. A significant portion of both meetings focused on the many issues, such as consent and periodic removal of profiles, arising from the new legislation and the Advisory Committee has provided considerable feedback on these topics. We are confident that the NDDB has identified the various technical, scientific, training, privacy, and ethical issues that need to be addressed, has considered the Advisory Committee's feedback, and is now in the implementation phase pursuant to the amended *DNAIA*.

National Missing Persons DNA Program (NMPDP)

The NDDB AC has advocated for a Missing Persons DNA Program since 2003 and has thoroughly examined the potential humanitarian, scientific, privacy and law enforcement principles (including legal, ethical, governance and policy issues) relating to the creation of the Program. The Advisory Committee was therefore pleased when on October 23, 2014 amendments to the *DNA Identification Act (DNAIA)* were tabled in Parliament in Bill C-43*, Economic Action Plan Act, No.2*. The new legislation supports investigations of missing persons and unidentified human remains through the creation of a DNA-Based Missing Persons Program, now known as the National Missing Persons DNA Program (NMPDP). The *DNA Identification Act* was amended to expand the number of DNA indexes in the NDDB. In addition to the existing Crime Scene and the Convicted Offenders Indexes, the legislation created three new humanitarian DNA indexes:

- The **Missing Persons Index** (MPI)
- The **Relatives of Missing Persons Index** (RMI), and;
- The **Human Remains Index** (HRI)

As well as two additional criminal DNA indexes to strengthen support provided to criminal investigations:

- The **Victims Index** (VI)
- The **Voluntary Donors Index** (VDI)

Legislation and Regulations governing the National Missing Persons DNA Program are designed to protect Canadians' privacy interests through safeguards that aim to ensure that DNA profiles contained in the NDDB are used only for their intended purpose.

Bill C-43 received royal assent on December 16, 2014, and leverages the expertise and Canada-wide coordination of the RCMP National Centre for Missing Persons and Unidentified Remains (NCMPUR) for missing person investigations as well as the scientific, technical and forensic expertise of the NDDB for DNA analysis and reporting. The NMPDP represents a collaborative interaction of both RCMP programs and became operational in the spring of 2018.

During this reporting period, the Advisory Committee dedicated considerable time and effort during each meeting to assess progress and provide input on the development of policies relating to consent and periodic disposal of profiles, technology upgrades, privacy implications, and level of readiness by the NDDB for implementation in March 2018. One significant change with respect to the delivery of the new legislation involved a review of the service delivery model for processing humanitarian samples. It had previously been proposed to use private laboratories to process biological samples but the current Government reviewed the service delivery model and determined that samples for missing persons and human remains would be submitted to the NDDB for processing. This will ensure the program has a consistent level of service across Canada, maintains one level of privacy, and is truly national in scope. The Advisory Committee welcomes and supports this decision.

The Advisory Committee also provided advice on the new *DNA Regulations* for the NMPDP. Sections 5.4 (*Written Consent)* and 8.1(3) (*Periodic Removal)* of the *DNA Identification Act* (DNAIA) required that regulations be drafted to mitigate legal and privacy concerns associated with the expanded use of DNA. Two new regulations were to address these concerns. The first regulatory amendment outlined the essential elements of informed consent that must be met before a DNA profile can be voluntarily added to the NDDB to support either criminal (i.e. VI and VDI) or humanitarian (i.e. RMI and VDI) investigations. The Advisory Committee provided advice and guidance with respect to what constituted informed consent, opportunities for withdrawal of consent, DNA sample and profile destruction following withdrawal of consent, and management of incidental findings. Additional advice was also provided regarding the need for a new consent to be obtained for missing persons investigations where the original sample was provided prior to the amended legislation coming in to force. The Committee also offered guidance in dealing with issues such as renewing consent, as well as the removal of a DNA profile if the DNA sample had been provided by a youth, once that individual reached the age of consent. In summary, the Advisory Committee also recommended that the consent documents be crafted in a manner which would be clearly understood and unintimidating to the donor of the sample.

The Committee offered suggestions with respect to the need for specialized training for investigators involved in dealing with families of missing persons to ensure a clear understanding of informed consent and potential implications of DNA analysis such as the determination of incidental findings. As a result, the National Centre for Missing Persons and Unidentified Remains (NCMPUR) developed a best practices document for investigators which was provided to the Advisory Committee for comment and feedback. A second regulatory amendment associated with the new legislation established timeframes for the periodic removal of DNA profiles from certain DNA indexes within the NDDB. The Committee provided advice with respect to timeframes for the removal of profiles for the new DNA indexes, always bearing in mind the privacy impact and rights of the individual and the ongoing investigational needs.

In addition, DNA profiles created as a result of the new DNA indexes cannot be shared internationally until new international agreements are in place. Those agreements will need to ensure the privacy and security of the new humanitarian profiles are consistent with the requirements of legislation governing those samples in Canada.

In summary, the Advisory Committee has had significant engagement with the personnel of the NDDB and NCMPUR program, strategic and operational policy development, and justice representatives involved in drafting *Regulations*. As a Committee, we have had the opportunity to provide input on a broad range of issues including, consent, withdrawal of consent, removal of profiles, disposal of profiles, operational guidelines and the various privacy issues associated to the new indexes as they become populated.

Department of Justice (DOJ)

Since its creation in 2000, the NDDB has been a valuable tool in enhancing public safety by solving crime, exonerating the innocent, and demonstrating its obligation to respect privacy rights. Over the past eighteen years, several legislative amendments, primarily focused on expanding the number of offences eligible for sample collection following conviction, have taken place to increase the number of profiles in the Convicted Offender Index. A recommendation, from both the House of Commons Standing Committee on Public Safety and National Security (2009) and the Standing Senate Committee on Legal and Constitutional Affairs (2010), was to amend the law to allow for the automatic collection of DNA from any adult who had been convicted in Canada of a designated offence as defined by Section 487.04 of the *Criminal Code.* Advisory Committee representatives appeared before both Committees and were in support of the recommendation. Since that review, ongoing efforts by the NDDB to educate the judiciary, courts, the legal community and the police through training sessions, educational forums, conference presentations and information sessions have and continue to

take place. Despite these efforts, research data indicates that the number of submissions to the NDDB falls well below what criminal convictions for DNA specified offences suggest should be in the Data Bank.

In July 2017 the Advisory Committee provided a written recommendation to the Commissioner of the RCMP strongly suggesting that these legislative amendments proposed in 2009 and 2010 be pursued. The Advisory Committee's position is that the automatic collection of DNA upon conviction of a designated offence would significantly enhance public safety and the efficiency and effectiveness of the NDDB.

Familial Searching

Familial searching is an additional search of a law enforcement DNA database conducted after a routine search has been completed and no exact profile matches are identified during the process. The DNA found at crime scenes is compared against a convicted offender DNA databank to identify DNA that strongly resembles that of an existing profile. Simply put, investigative leads to parents, off-spring or siblings can be identified using this means of investigation.

Familial searching has been successfully utilized in a number of jurisdictions in the United States, United Kingdom, and other countries to create new investigative leads for heinous crimes where all other procedures have been exhausted.

The NDDB Advisory Committee studied, reviewed, and had numerous presentations on this issue over a ten year period and included comments on this matter in their annual reports. During that time, Members of the Advisory Committee also appeared before the Standing Senate Committee on Legal and Constitutional Affairs in 2010. The Senate Committee recommended that the Department of Justice study the matter to determine how to appropriately craft a provision that would balance the need to protect society, the need to ensure the respect of privacy rights, and the need to preserve the presumption of innocence as it relates to familial searching.

In 2015, the Advisory Committee once again reviewed this matter and concluded that the value of familial searching outweighs the inherent risks associated to its use. The humanitarian aspect of not doing what is possible to protect the public must also be considered since the public remains at risk when violent criminals remain at large. Additionally, familial searching has been used to exonerate the innocent.

As a result, correspondence was submitted to the Commissioner of the RCMP in December 2015 recommending the value of familial searching be pursued with the Minister of Public Safety for serious, violent, and serial crimes for open cases where all other investigative avenues have been exhausted. The Advisory Committee recognizes that the current *DNA Identification Act* legislation effectively forbids familial searching as the NDDB can only report exact matches and partial matches where the profile cannot be excluded as a possible match. It would therefore be necessary to pursue legislative amendments to make it possible to report similar matches. The Advisory Committee continues to await a response to their correspondence regarding this matter.

Canadian Scientific Working Group on DNA Analysis Methods (CAN SWGDAM)

Canadian SWGDAM, comprised of scientists from all three Canadian forensic laboratory systems, is responsible for researching, reviewing, and providing recommendations on issues related to evolving DNA science, technology, policy and acceptance standards.

CODIS 8, Next Generation Sequencing (NGS), Rapid DNA, mixture validation, kinship testing, and testing new technologies by the various laboratories have been some of the priorities of SWGDAM to ensure the most advanced approaches in DNA testing are available in Canada. They have also been closely engaged in discussions related to DNA profiles of missing persons and unidentified human remains which are currently stored in the various laboratory systems to assess whether they qualify for upload to the NDDB now that the missing persons program has become operational.

Canadian SWGDAM is an important resource for the Advisory Committee in terms of evolving issues and challenges as it relates to the science and technological developments in the world of forensic DNA.

Conclusions for 2017/2018

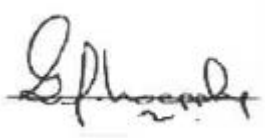
The Advisory Committee has had considerable interaction with representatives of the NDDB, individuals involved with drafting the regulations, personnel from NCMPUR and senior management of the RCMP over the past year. These discussions have provided exposure to advancements and changes in technology, development of policies and procedures that will support the legislation creating the National Missing Persons DNA Program, and challenges with respect to a state of readiness for delivery of the missing persons program pursuant to Bill C-43. We have had the opportunity, both during and following meetings, to provide verbal and written feedback on a number of issues where our input has been solicited. It is evident that a

great deal of cooperation and effort has been put forward by the NDDB and NCMPUR to achieve the intended purpose of the legislation in supporting investigations of missing persons and unidentified human remains while remaining highly sensitive to the privacy of individuals.

In 2017, the Committee formally reaffirmed the recommendation that the Government should consider the automatic collection of DNA profiles from offenders convicted of all designated offences as set by the *DNAIA* and the *Criminal Code*. It is also monitoring the passage of their recommendation to allow Familial Searching techniques to support investigations.

Over the past eighteen years, the NDDB has played a critical role in solving crime and enhancing public safety in Canada. It continues to enhance its capabilities through modernization of technology and training of personnel which ensured it was prepared for the challenges of implementing the National Missing Persons DNA Program in March 2018. The Advisory Committee reiterates its confidence in the NDDB to continue to deliver a professional science program as it relates to the use of DNA for forensic and humanitarian purposes in Canada. The Committee appreciates the dedication and contribution of the NDDB staff in continuing to deliver a world class DNA program as it relates to public safety.

The Committee would like to acknowledge and thank employees of the NDDB, the Department of Justice, forensic and police partners as well as other contributors to the Advisory Committee for their outstanding support and cooperation which greatly enhance deliberations and provides the basis for our discussions and recommendations.



G.J. Loeppky
Chairperson
National DNA Data Bank Advisory Committee