Ensuring Good Animal Practice in Science in Canada
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Ensuring Good Animal Practice in Science in Canada

The Canadian Council on Animal Care (CCAC) is an autonomous and independent body, created in 1968 to oversee the ethical use of animals in science in Canada. The CCAC is registered as a non-profit organization, and is financed primarily by the Canadian Institutes of Health Research (CIHR) and the Natural Sciences and Engineering Research Council (NSERC), with additional contributions from federal science based departments and agencies and private institutions participating in its programs. It is governed by a Council of representatives from 22 national organizations.

The CCAC acts as a quasi-regulatory body and sets standards (its guidelines documents and policy statements) on animal care and use in science that apply across Canada. It is accountable to the general public and is responsible for the dissemination of information on the use of animals in science to Canadians. In addition to guidelines documents and policy statements, the CCAC develops comprehensive annual statistics on the number of animals used in science and produces an annual report to disseminate information on its activities to its constituents and the general public.

The present report covers activities undertaken by the CCAC from April 1, 2011 to March 31, 2012.

Dr. Marina von Keyserlingk
Chair (2011-2012), CCAC Council
Grant Submission 2011-2014 to the Granting Agencies

The unexpected September 2011 decision of the federal granting agencies to restrict CCAC’s funding to one year (rather than the traditional three-year grant) has highlighted the need for more open communication between the CCAC and its funding partners. In the short-term, the CCAC 2011-2012 budget is taking a pragmatic fiscally responsible approach, maintaining planned core activities. Further efficiencies and cost reduction initiatives will be implemented in 2012-2013.

Review of the Structure and Size of Council

Given the requirement that an animal welfare representative sit on each standing committee, the number of seats held by the Canadian Federation of Humane Societies (CFHS) on Council has increased from three to four.

This fourth seat was made available by the Association of Universities and Colleges of Canada (AUCC) who relinquished one of its four seats and, at the October 1, 2011 meeting, the CCAC Council adopted a motion to implement these changes (see diagram). The latter came into effect April 1, 2012, after Industry Canada approved the required changes to the CCAC by-laws.
Change in Executive Leadership

Retirement of Dr. Clément Gauthier

Dr. Clément Gauthier, who led the CCAC in his role as Executive Director since 1999, retired on March 31, 2012.

Dr. Gauthier was instrumental in realizing numerous changes to the CCAC, including the reorganization of the Secretariat into sectors, and for establishing more effective relationships with institutional animal care committees and increasing the recognition of CCAC in Canada and abroad.

We wish to express our sincere gratitude to Dr. Gauthier for his dedication to the CCAC, and will continue to seek his advice as both a colleague and as a good friend.

New CCAC Executive Director, Dr. Norman Willis

With the assistance of a recruitment firm, the search for a new Executive Director began in late 2011 and came to a close in March 2012 with a successful candidate possessing valuable experience in the field of animal welfare. The Board is honoured to have Dr. Willis join the organization and pleased he was able to begin his term almost immediately. Dr. Willis officially undertook his duties on April 2, 2012.

Dr. Willis is an internationally recognized professional with significant experience, both with Agriculture and Agri-Food Canada and the Canadian Food Inspection Agency. His areas of specialty include foreign animal diseases, and virological diagnostics and research. His accomplishments include managing the construction of five laboratories, one of which is the Canadian Science Centre for Human and Animal Health, which is jointly managed with the Public Health Agency of Canada. As well as having worked as Director General, Chief Veterinary Officer and Animal Health Technical Advisor, he served for fifteen years in the World Organization for Animal Health (OIE), including leading the organization as President.

Dr. Willis is a Doctor of Veterinary Medicine and holds a PhD (Virology) from the University of Toronto. Over the years, he has been honoured with several awards for meritorious service.
National and International Recognition of the CCAC

Memorandums of Understanding with Federal Science-Based Departments and Agencies

The CCAC establishes Memorandums of Understanding (MOU) with federal science-based departments and agencies. The MOUs will define each organization’s activities and responsibilities with respect to animal care and use and the oversight of these activities through institutional animal care committees and CCAC certification.

A MOU was concluded with Health Canada and signed on July 15, 2011, and CCAC continues to work on four more. MOUs currently under development during FY 2011-2012 between the CCAC and the federal science-based departments and agencies are:

- Canadian Food Inspection Agency (CFIA) [completion: 95%]
- Department of National Defence (DND) [completion: 80%]
- Environment Canada (EC) [completion: 70%]
- Fisheries and Oceans Canada (DFO) [completion: 50%]

Eighth World Congress on Alternatives and Animal Use in the Life Sciences

The CCAC hosted the Eighth World Congress on Alternatives and Animal Use in the Life Sciences (WC8) on August 21-25, 2011 in Montréal, Québec. This is the first time the Congress has been hosted by a national organization responsible for the oversight of animal use in science, and it brought together over 800 delegates from 52 countries, including 186 Canadian participants.

The CCAC would like to express its appreciation to the following sponsors represented on the CCAC Council that helped make hosting this unique event possible for the CCAC and Canada:

- Canadian Association for Laboratory Animal Medicine (CALAM)
- Canadian Association for Laboratory Animal Science (CALAS)
- Canadian Federation of Humane Societies (CFHS)
- Canadian Veterinary Medical Association (CVMA)
- Canadian Institutes of Health Research (CIHR)

Please consult the Three Rs section of this report (page 8) for more details about the WC8.
Guidelines Development and Implementation

During the public consultation portion of the development of the CCAC guidelines on: genetically-engineered animals used in science, it quickly became apparent that the oversight of the use of genetically-engineered animals (GEAs) is of great interest to many Canadian scientists; the CCAC received an abundance of responses from individual experts, member organizations of the CCAC Council and senior administrators of universities. The CCAC also received (and continues to receive) many expressions of concern from members of the public and the animal advocacy movement about the use of animals in research and, in particular, GEAs.

Keeping the lines of communication open despite divergent interests is of key importance for the CCAC. In the case of the GEA guidelines document, it was decided, for the first time in the history of the Guidelines Program, to hold a fourth widespread review. Twenty-one sets of comments were received during the August 29 – October 28, 2011 fourth review. The establishment of up-to-date standards in this area is a tangible means of assuring the public that, along with scientific evidence and expert opinion, their concerns are being incorporated in the Canadian oversight of the ethical use of animals in science.

A number of documents are under development to support the implementation of the CCAC guidelines on: genetically-engineered animals used in science once published. These include frequently asked questions (FAQs) and information on data and animal sharing, documenting animal information, and possible refinements to commonly used GEA generation methods.

Other guidelines documents under development in FY 2011-2012 included:

- CCAC guidelines on: the care and maintenance of marine mammals
- CCAC guidelines on: air quality of laboratory animal facilities
- CCAC guidelines on: the care and maintenance of rats
- CCAC guidelines on: the care and maintenance of nonhuman primates
- CCAC guidelines on: the care and maintenance of mice

FAQs which emerged from reviews of draft versions of the CCAC guidelines on: euthanasia of animals used in science have also been posted on the CCAC website.

International Harmonization of Standards

Dr. Gilly Griffin, CCAC Guidelines and Three Rs Programs Director, was named Canada’s representative on the International Council for Laboratory Animal Science Governing Board during the ICLAS Symposium held on June 13-15, 2011 in Istanbul, Turkey.
Assessment and Certification of Canadian Institutions

The Assessment and Certification (AAC) Program is responsible for assessing the ethical use and care of animals for scientific purposes in Canada through a peer review process. The keystone of the AAC Program is the local animal care committee (ACC) set up by each participating institution according to the CCAC policy statement on: terms of reference for animal care committees. Assessment visits are conducted by multidisciplinary teams of experts and community representatives.
Assessment Visits

The CCAC certifies institutions within three broad sectors: academic (research centres, colleges, and small, medium, and large universities); government (research and testing centres); and private (research, testing, and production of animals or biologics for scientific purposes). The size and complexity of institutional animal care and use programs vary widely, with one CCAC Certificate of GAP – Good Animal Practice® covering over 10 research centres in the case of certain large universities.

Of the 66 assessment visits conducted between April 1, 2011 and March 31, 2012, there were 56 regular, 4 interim, 3 special, and 3 orientation visits. In total, 195 institutions are currently part of the CCAC’s certification process.

Assessment and Implementation Reports: The Certification Process

Following assessment visits, assessment directors, scientific writers, assessment panel and Assessment and Certification Committee (AACC) members collaborate to prepare detailed reports. Assessment reports support institutions in achieving best practices in animal care and use, identify deficiencies, and, where necessary, include recommendations to help institutions improve their animal care and use program and meet CCAC guidelines and policy statements. Assessment reports were produced for 55 regular, 4 interim, 3 special, and 3 orientation visits in the 2011-2012 FY.

Institutions respond to assessment report recommendations by submitting an implementation report to the CCAC, with the timeline for response reflecting the type of recommendation (Major,Serious, and Regular). In many cases institutions are asked to submit additional information to clarify or complete their implementation report, or to provide an update on work in progress at the time of the original response. One hundred and forty-one institutional responses addressing CCAC recommendations were processed between April 1, 2011 and March 31, 2012.

Between April 1, 2011 and March 31, 2012, 64 CCAC Certificates of GAP – Good Animal Practice® were issued to institutions that responded to CCAC recommendations and were assigned a status by the AACC. Twenty institutions were assigned a status of Compliance, including two that had no recommendations and received their status and Certificate shortly following an interim visit. Forty-four institutions were assigned a status of Conditional Compliance. In those cases, the institutions continue to work towards full compliance with CCAC policy statements and guidelines, and other relevant standards.

Review of CCAC Policy Statements and Supporting Materials

Several CCAC policy statements and supporting materials were under revision or reviewed during FY 2011-2012. These documents included:

- **CCAC policy statement on: terms of reference for animal care committees** (2006)
- **CCAC policy statement on: assessment panels** (1999)
- **CCAC policy statement on: the assessment program of the CCAC** (2000)

FAQs on post-approval monitoring are being drafted to provide additional, practical information on the elements involved in post-approval monitoring and the ways in which they can be applied. FAQs on human resources are also in development, and will provide examples of possible animal care and use program structures for various categories of institutions and examples of the human resources needed to effectively support these structures.

1 In March 2011, CCAC Council approved a name change for the Assessment Committee to Assessment and Certification Committee (AACC), and approved new standing rules for the AACC. The name of the Assessment Program was also changed to the Assessment and Certification Program.
The Three Rs tenet (replacement, reduction and refinement) provides a set of guiding ethical principles that help to minimize adverse impacts to animals used in science and improve their welfare. It is widely accepted as the ethic of animal experimentation and is embedded in the conduct of animal-based science in Canada and throughout the world. The CCAC is internationally viewed as Canada’s Three Rs Centre.

Replacement, Reduction and Refinement Alternatives for Animal Use in Science

Eighth World Congress on Alternatives and Animal Use in the Life Sciences

This important international Three Rs conference was hosted by CCAC in Montréal on August 21-25, 2011 and allowed the very substantive contributions made by the CCAC and Canadian investigators and veterinarians in the area of refinement alternatives to be communicated to our peers in the international community. Under the motto of “The Three Rs – Together it’s Possible” the WC8 brought together over 800 delegates from 52 countries and clearly showed Canada’s standing as a leader in humane science, both nationally and internationally.

The scientific program was intentionally broad to encompass the strides made towards implementing new technologies for regulatory testing. However, it also looked at new approaches for minimizing and refining animal use in biomedical science, as well as in diverse research areas such as agricultural and wildlife research. This resulted in an astonishing 54 sessions, with over 200 oral and over 400 poster presentations.

A unique achievement that will remain as the WC8 legacy is the Montréal Declaration on the Synthesis of Evidence to Advance the 3Rs Principles in Science. Signed by 81 delegates participating at the WC8, this declaration calls for a change in the culture of planning, executing, reporting, reviewing and translating animal research via the promotion and coordination of synthesis of evidence of animal studies. By endorsing it, the Congress agreed to actively promote the use of structured ways to advance the implementation of the Three Rs. At the Congress, an exploratory meeting of scientists including CCAC representatives interested in the field of systematic reviews (one type of synthesis of evidence used in medical research) of animal studies was held, and it was agreed to start an international collaboration to further develop this field.

In a September 13, 2011 thank you message to all participants, the WC8 Co-Chairs, Drs. Clément Gauthier and Herman Koëter concluded: “We could not have been more pleased with the turnout for the
meeting, the quality and diversity of the information presented, and the active discussions that were generated both during and outside of the sessions”, which has been echoed in the below unsolicited comment from an international participant:

“I returned home with lots of good memories on my stay in Montréal. It was a great congress, well organized, perfect in balance with regard to each of the Three Rs.”

– Coenraad Hendriksen, Netherlands, Alternatives Congress Trust (ACT) member

Fellowship Program in Animal Policy Development

The CCAC Fellowship program is an important part of CCAC’s work to understand and address ethical issues relating to the use of animals in science. It provides an opportunity to bring together the novel research produced by CCAC fellows with the knowledge and experience of experts both within Canada and internationally.

Dr. Marc Avey’s fellowship focuses on pedagogical merit review of education protocols using animals. He is currently involved in a research project to examine current practices, gather feedback on guidelines and recommendations, and explore what is considered ‘best practice’ within the community of post-secondary teaching and training. The study focuses on identifying processes, impacts and efficiencies, while evaluating the level of consensus among different stakeholder groups.

Ms. Shannon Duffus’ research continues to focus on pain and analgesia in laboratory animals. She is involved in two research projects: the first is a web-based study to examine public attitudes toward the use of animals in pain research; data collection and preliminary analysis for this study have been completed. The second project is an interview-based study to investigate analgesic practices in laboratory animals and obstacles to the refinement of painful protocols where analgesia is withheld.

Dr. Elisabeth Ormandy completed her fellowship on August 31, 2011. A manuscript of the results of her research exploring people’s values, attitudes and concerns regarding the generation and use of genetically-engineered animals in science has been submitted to Public Understanding of Science.

Revamping of the Three Rs Microsite

Intensive work continued on the reorganization and redesign of the Three Rs Microsite to harmonize it with the CCAC’s new website. To promote awareness and use of the microsite, the Guidelines and Three Rs Programs Director gave presentations at Queen’s University in Kingston, Ontario on June 1, 2011; and at the ICLAS Symposium in Istanbul, Turkey on June 13-15, 2011.

In addition, a package of slides highlighting the key features of the microsite was prepared for use by AAC Sector staff during assessment visits and by CCAC Council members at scientific meetings.

Closing remarks and acknowledgements at WC8
The CCAC develops different educational and reference materials to support the training needs of all of its audiences, and makes materials available through external links. These resources and events include the training syllabus, training modules and other educational materials, workshops, and web-based seminars. The Education, Training and Communications (ETC) Program is responsible for developing education and training opportunities for CCAC constituents.

Education and Training Opportunities

Training Modules for Farm Animal Users
Since the reorganization of the CCAC training modules into knowledge streams, work has continued to progress on the development of new training modules for the farm animal stream. The training modules under development during 2011-2012 FY included modules on beef and dairy cattle, and poultry.

Webinars for Members of Institutional ACCs
The following webinars were offered between April 1, 2011 and March 31, 2012:

- La formation des utilisateurs d’animaux, des membres de CPA et des professionnels de la santé animale was presented on April 5, 2011 and was attended by 27 registered participants, representing a total of approximately 150 participants.
- Safeguards and Service – Striking the Right Balance, the first CCAC pre-recorded webinar, was made available on January 27, 2012 in English and French; this new format included the opportunity for viewers to submit questions on the topic.

50th CALAS Symposium
The CCAC participated in the 50th CALAS Symposium in Toronto, Ontario on May 14-17, 2011 by offering education and training opportunities to the participants through a workshop and a scientific session.

The ACC 101 workshop provided an orientation session for community representatives, students, technical representatives, veterinarians, and faculty members to help them better understand the CCAC programs and the support and resources available to them as ACC members. A session on “Technicians’ Contributions to Animal Care and Use in Canada” highlighted the essential contributions that animal care technicians make at all levels of animal care and use programs.
Communications with Canadians

Myths and Realities on Animal use for Scientific Purposes in Canada

In Canada, the use of animals in research, teaching, and testing is acceptable only if it promises to contribute to the understanding of fundamental biological principles, or to the development of knowledge that can reasonably be expected to benefit humans or animals. Those using animals have an ethical responsibility to employ the most humane methods on the smallest number of appropriate animals required to obtain valid information. However, there are many misconceptions and myths surrounding animal-based science. It is important to address these myths so that people can form educated opinions regarding the use of animals in science in Canada.

To help dispel some of these misconceptions, the CCAC has developed a Myths and Realities section on its website. Myths such as “the use of animals in science is not regulated or monitored”, “death is the only outcome for animals used in science”, and “nonhuman primates, cats and dogs make up the bulk of animals used in research” are addressed in this section, which can be accessed either on the home page or directly at: http://www.ccac.ca/en_/myths-realities.

Recent Interviews and Media Mentions

The CCAC is often consulted by members of the media on matters concerning animal research in Canada. This provides an opportunity to communicate with the public on issues surrounding animal used in science and also with Canadians who might not otherwise be familiar with CCAC’s mandate and goals. Media coverage for 2011-2012 included:

- “Lab mice: The tiny footprints behind 100 years of medical discovery” published in the National Post on January 14, 2012
- “University plans dairy research facility” published in Better Farming on January 14, 2012
- “Des labos sans animaux” published in La Presse on December 3, 2011 (in French)
- “Nos amis les cobayes” aired on the show Les années lumière (CBC) on August 28, 2011 (in French)
- “La planète des singes…et la science” aired on the show Les années lumière (CBC) on August 21, 2011 (in French)

RESOURCE – CCAC’s Newsletter

The latest edition of RESOURCE, the CCAC newsletter, was published on January 20, 2012. This 18-page edition encompassed a total of 13 articles covering news from the CCAC programs, replacement alternatives, the WC8, and the 2010 CCAC annual survey of animal use.

The newsletter was also redesigned for a more updated, engaging and dynamic look. Available exclusively in electronic format, this edition was produced in full colour, and was structured to be more visually appealing and informative.

The ETC Program works to ensure the CCAC communicates effectively with the general public, the research community, and the individuals responsible for the care of animals used in science.

Read it here: http://www.ccac.ca/en_/publications/newsletter
## CCAC Survey of Animal Use 2010

Number of Animals Used in 2010 by Institutions Participating in the CCAC Program

<table>
<thead>
<tr>
<th>Category of Animals</th>
<th>Number of Animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphibians</td>
<td>69,736</td>
</tr>
<tr>
<td>Canadian Wild Species</td>
<td>102,661</td>
</tr>
<tr>
<td>Cats</td>
<td>4,438</td>
</tr>
<tr>
<td>Cephalopods</td>
<td>5</td>
</tr>
<tr>
<td>Chinchillas</td>
<td>147</td>
</tr>
<tr>
<td>Dogs</td>
<td>10,381</td>
</tr>
<tr>
<td>Domestic Birds</td>
<td>179,743</td>
</tr>
<tr>
<td>Farm Animals</td>
<td>85,826</td>
</tr>
<tr>
<td>Fish</td>
<td>1,416,042</td>
</tr>
<tr>
<td>Fur Animals</td>
<td>2,072</td>
</tr>
<tr>
<td>Gerbils</td>
<td>139</td>
</tr>
<tr>
<td>Guinea Pigs</td>
<td>23,629</td>
</tr>
<tr>
<td>Hamsters</td>
<td>2,929</td>
</tr>
<tr>
<td>Marine Mammals</td>
<td>1,809</td>
</tr>
<tr>
<td>Mice</td>
<td>1,132,706</td>
</tr>
<tr>
<td>Miniature Swine</td>
<td>183</td>
</tr>
<tr>
<td>Nonhuman Primates</td>
<td>4,629</td>
</tr>
<tr>
<td>Other Non-Canadian Species</td>
<td>719</td>
</tr>
<tr>
<td>Rabbits</td>
<td>6,568</td>
</tr>
<tr>
<td>Rats</td>
<td>260,900</td>
</tr>
<tr>
<td>Reptiles</td>
<td>5,821</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3,311,083</strong></td>
</tr>
</tbody>
</table>

For more details, visit [http://www.ccac.ca/en_/publications/audf](http://www.ccac.ca/en_/publications/audf)
Council Organizational Chart

**COUNCIL**
Composed of 28 representatives of 22 regular member organizations and responsible for establishing policy statements recommended by the five standing committees, electing the Vice-Chair, authorizing budget and ensuring the duties are performed.

**EXECUTIVE COMMITTEE**
- Chair
- Vice-Chair
- Past-Chair
- Executive Director

<table>
<thead>
<tr>
<th>RESPONSIBILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSESSMENT AND CERTIFICATION</strong></td>
</tr>
<tr>
<td>Responsible for reviewing and evaluating assessment and implementation reports, and assigning CCAC statuses according to the CCAC certification process</td>
</tr>
<tr>
<td><strong>EDUCATION, TRAINING AND COMMUNICATIONS</strong></td>
</tr>
<tr>
<td>Responsible for identifying education and training needs and coordinating the development of training resources, and for coordinating external communications</td>
</tr>
<tr>
<td><strong>THREE Rs</strong></td>
</tr>
<tr>
<td>Responsible for identifying opportunities and coordinating the development of tools to promote and implement the Three Rs in Canadian science</td>
</tr>
<tr>
<td><strong>GUIDELINES</strong></td>
</tr>
<tr>
<td>Responsible for identifying the need for CCAC guidelines and for coordinating their development</td>
</tr>
<tr>
<td><strong>PLANNING AND FINANCE</strong></td>
</tr>
<tr>
<td>Responsible for long-term planning, financial oversight and program management evaluation</td>
</tr>
</tbody>
</table>

**BOARD OF DIRECTORS**
Chairs of the five standing committees and the Executive Committee

**COUNCIL**
Composed of 28 representatives of 22 regular member organizations and responsible for establishing policy statements recommended by the five standing committees, electing the Vice-Chair, authorizing budget and ensuring the duties are performed.
Members on CCAC Assessment Panels

Veterinarians
Dr. Patricia A. Alderson, Lakehead University
Dr. Simon Authier, LAB Research North America*
Dr. Kate Banks, University of Toronto*
Dr. Toni Bayans, University of Alberta
Dr. Craig Bihun, National Research Council Canada*
Dr. Ronald Charbonneau, Consultant*
Dr. Julie Chevrette, Charles River Laboratories Preclinical Services Montreal Inc.
Dr. Lucie Côté, McGill University
Dr. Kathleen Delaney, McMaster University*
Dr. Jean-Paul Descôteaux, Consultant
Dr. Howard Dobson, CanCog Technologies*
Ms. Caroline Dubé, Centre de recherche du CHUL
Dr. Andrew Fletch, Consultant*
Dr. Marie-Claude Gagnon, Consultant
Dr. Dorine Gilbert, Charles River Laboratories Preclinical Services Montréal Inc.*
Dr. Jim C. Gourdon, McGill University*
Ms. Janette Green, McGill University
Dr. Jean-Marc Guillemette, Cégep de Saint-Hyacinthe
Dr. Sherry Hannon, Feedlot Health Management Services
Dr. George Harapa, University of Toronto*
Dr. Chris J. Harvey-Clark, University of British Columbia*
Dr. Hélène Heon, Centre hospitalier de l’Université de Montréal*
Dr. Richard Hodges, University of Manitoba*
Dr. Gerald Johnson, Consultant
Dr. Josée Labrecque, Primus Bio-resources Inc.
Dr. Stéphane Lair, Université de Montréal*
Dr. Marie-André Laniel, Université de Montréal
Dr. Jean Lavallée, University of Prince Edward Island
Dr. Lynn Matsumiya, McGill University
Dr. Badru Moloo, University Health Network*
Dr. Douglas W. Morck, University of Calgary*
Dr. Patrick N. Nation, Animal Pathology Services Ltd.*
Dr. Martha J. Navarro, Health Canada

* Identifies members who have served as chairperson on an assessment panel

Dr. Robert Patenaude, Ministère des Ressources naturelles et de la Faune
Dr. Dominique Poirier, Cégep de Saint-Hyacinthe
Dr. Aleksandar Popovic, University of Guelph*
Dr. Valerie Smid, University of Manitoba*
Dr. Sophie St-Hilaire, University of Prince Edward Island
Dr. Susan Warren, Brock University
Dr. Andrew Winterborn, Queen’s University*

Public Representatives Appointed in Collaboration with the Canadian Federation of Humane Societies

Mr. Tim P. Battle, Edmonton, AB
Mr. Scott E. Brohman, Ottawa, ON
Ms. Ruth A. Bruins, Medicine Hat, AB
Mr. Hugh Coghill, Sutton West, ON
Mr. Martin Cole, Beaverton, ON
Dr. Dirk Dekens, Calgary, AB
Mrs. Susan Edwards, Elora, ON
Ms. Lise Gagnier, Le Gardeur, QC
Ms. Lise Houde, Ste-Adèle, QC
Mr. Andrew Hebda, Halifax, NS
Ms. Lise Houde, Ste-Adèle, QC
Dr. Susan Huntley, Edmonton, AB
Dr. James Lawson, Vancouver, BC*
Ms. Melissa Logan, Edmonton, AB
Mr. Serge Marquis, Trois-Rivières, QC
Dr. Donald McKay, Puslinch, ON
Mr. Roger Mercier, Québec, QC
Mr. Robert J. Milling, Ottawa, ON
Ms. Claude Provancher, Lévis, QC
Mr. Louis-André Richard, Ancienne-Lorette, QC*
Mrs. Evelina Smith, Sherbrooke, QC*
Ms. Pam Tonary, Truro, NS
Ms. Sylvie Tremblay, Jonquière, QC

Mr. John van der Hoeven, Maple Ridge, BC
Mr. Robert Van Tongerloo, Manotick, ON
Ms. Lorna Verschoore, Winnipeg, MB
Mrs. Christine Wooldridge, Shawinigan Lake, BC

Scientists
Mr. John Batt, Dalhousie University*
Ms. Linda Campbell, Vanier College
Ms. Suzanne Carioto, Consultant
Dr. Nicholas Cermakian, McGill University*
Dr. Michael P. Czubryt, University of Manitoba
Ms. Maryse Dansereau, Université de Montréal
Dr. Eileen Denovan-Wright, Dalhousie University*
Dr. Michel Flamand, Centre de recherche du CHUQ
Dr. Alain Giguère, Agriculture and Agri-Food Canada*
Dr. Matthew R. Holahan, Carleton University*
Mrs. Anna Jimenez, McGill University
Dr. John Kingma, Consultant
Dr. Edwin A. Kroeger, University of Manitoba*
Dr. Chantal J. Lambert, Université de Montréal*
Ms. Lynn Macdonald, University of British Columbia
Dr. Donald McKay, University of Alberta
Dr. Stéphane Ménard, Université de Montréal
Dr. Thomas Moon, University of Ottawa*
Dr. Martin Paré, Queen’s University*
Ms. Karen Parisien, University of Toronto
Ms. Kelley Putzu, Wilfrid Laurier University
Dr. Dan W. Rurak, University of British Columbia*
Mr. Martin Ryan, University of Waterloo
Mr. Ralph B. Scheurle, University of Victoria
Ms. Suzanne Smith, Université McGill
Dr. René St-Arnaud, Shriner’s Hospital for Children*
Dr. Éric Thorin, Institut de cardiologie de Montréal*
Dr. Mark G. Torchia, University of Manitoba*
Dr. Marina von Keyserlingk, University of British Columbia*
Mr. Norman White, University of Toronto*
Dr. Tak Pan Wong, McGill University
Contributors to Guidelines Development

Subcommittee on Biotechnology
Dr. Bruce Murphy, Université de Montréal (Chair)
Dr. Garth Fletcher, Memorial University of Newfoundland
Mr. Darren Grandel, Ontario SPCA
Dr. Gary Halbert, Canadian Food Inspection Agency
Dr. Hélène Héon, Centre Hospitalier de l’Université de Montréal
Dr. Eike-Henner Kluge, University of Victoria
Dr. Lauryl Nutter, Toronto Centre for Phenogenomics
Dr. Sui-Pok Yee, University of Connecticut Health Center

Subcommittee on Marine Mammals
Dr. Jon Lien, Memorial University of Newfoundland (Chair)
Dr. Pierre-Yves Daoust, University of Prince Edward Island
Mr. John Ford, Fisheries and Oceans Canada
Mr. Henrik Kreiberg, Fisheries and Oceans Canada
Dr. Clément Lanthier, Calgary Zoo
Dr. Kay Mehren, Veterinarian Emeritus, Toronto Zoo
Ms. Tracy Stewart, Marineland of Canada Inc.
Mr. Clint Wright, Vancouver Aquarium

Subcommittee on Rats
Dr. Toni Bayans, University of Alberta (Chair)
Dr. Sylvia Craig, Dalhousie University
Dr. Patricia Turner, University of Guelph
Dr. Lee Niel, University of Guelph

Subcommittee on Air Quality in Animal Facilities
Dr. Donald McKay, University of Alberta (Chair)
Mr. Christopher Cosgrove, Cosgrove Facility Design Solutions
Dr. Gilles Demers, CCAC Assessment Director
Dr. Germain Rivard, MouseCare
Dr. Ken Ugwa, Public Health Agency of Canada

Subcommittee on Nonhuman Primates
Dr. Martin Paré, Queen’s University (Chair)
Dr. Stefan Everling, University of Western Ontario
Dr. Stéphane Goulet, Primus Bio-Ressources
Dr. Jim Gourdon, McGill University
Dr. Julio Martinez-Trujillo, McGill University
Dr. Andrew Winterborn, Queen’s University
Members of the Standing Committees

Board of Directors
Dr. Marina von Keyserlingk (Chair of Council)
Dr. Martin Paré (Vice-Chair of Council)
Mr. Henrik Kreiberg (Past Chair of Council)
Dr. François A. Auger (Chair – Three Rs Committee)
Mr. David Buffett (Chair – Planning and Finance Committee)
Dr. Anne Marie de Passillé (Chair – Education, Training and Communications Committee)
Dr. Doug Morck (Chair – Assessment and Certification Committee)
Dr. Albrecht Schulte-Hostedde (Chair – Guidelines Committee)
Dr. Clément Gauthier (Executive Director, Ex Officio, non-voting)

Planning and Finance Committee
Mr. David Buffett (Chair)
Ms. Dawn Jeffrey
Dr. Marina von Keyserlingk (Ex Officio, voting)
Dr. Clément Gauthier (Ex Officio, non-voting)

Assessment and Certification Committee
Dr. Doug Morck (Chair)
Dr. Dorine Gilbert
Dr. Sylvie Marleau
Mr. Bill Pearce

Dr. René St-Arnaud
Dr. Éric Thorin
Dr. Mark Torchia
Ms. Evelina Smith
Dr. Marina von Keyserlingk (Ex Officio, voting)
Dr. Clément Gauthier (Ex Officio, non-voting)
Dr. Michael Baar (Ex Officio, non-voting)
Ms. Marie Bédard (Ex Officio, non-voting)
Dr. Gilles Demers (Ex Officio, non-voting)
Dr. Denis Rainville (Ex Officio, non-voting)
Ms. Jumoke Fasoyinu (Secretariat liaison person)

Education, Training and Communications Committee
Dr. Anne Marie de Passillé (Chair)
Dr. Craig Bihun
Dr. James Gilchrist
Dr. Ira Hill
Dr. Marina von Keyserlingk (Ex Officio, voting)
Dr. Clément Gauthier (Ex Officio, non-voting)
Ms. Pascale Belleau (Secretariat liaison person)

Guidelines Committee
Dr. Albrecht Schulte-Hostedde (Chair)
Dr. Gary Halbert
Dr. Laird Shutt
Dr. Patricia Turner
Dr. Marina von Keyserlingk (Ex Officio, voting)
Dr. Clément Gauthier (Ex Officio, non-voting)
Dr. Gilly Griffin (Ex Officio, non-voting)
Ms. Julie Dale (Secretariat liaison person)

Three Rs Committee
Dr. François A. Auger (Chair)
Dr. Toni Bayans
Ms. Katharine Browne
Dr. Eileen Denovan-Wright
Mr. Darren Grandel
Dr. Marina von Keyserlingk (Ex Officio, voting)
Dr. Clément Gauthier (Ex Officio, non-voting)
Dr. Gilly Griffin (Ex Officio, non-voting)
Ms. Nicole Fenwick (Secretariat liaison person)
## Member Organizations and Representatives

<table>
<thead>
<tr>
<th>Organization</th>
<th>Representative(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and Agri Food Canada (AAFC)</td>
<td>Dr. Anne Marie de Passillé</td>
</tr>
<tr>
<td>Association of Canadian Faculties of Dentistry (ACFD)</td>
<td>Dr. James Gilchrist</td>
</tr>
<tr>
<td>Association of Faculties of Medicine of Canada (AFMC)</td>
<td>Dr. Edwin Kroeger</td>
</tr>
<tr>
<td>Association of Universities and Colleges of Canada (AUCC)</td>
<td>Dr. Eileen Denovan-Wright&lt;br&gt;Mr. Daniel Thompson&lt;br&gt;Dr. Sylvie Marleau&lt;br&gt;Dr. Mark Torchia</td>
</tr>
<tr>
<td>Canada's Research Based Pharmaceutical Companies (℞&amp;D)</td>
<td>Dr. Dorine Gilbert</td>
</tr>
<tr>
<td>Canadian Association for Laboratory Animal Medicine (CALAM)</td>
<td>Dr. Denna Benn</td>
</tr>
<tr>
<td>Canadian Association for Laboratory Animal Science (CALAS)</td>
<td>Dr. Toni Bayans</td>
</tr>
<tr>
<td>Canadian Bioethics Society (CBS)</td>
<td>Ms. Katharine Browne</td>
</tr>
<tr>
<td>Canadian Cancer Society Research Institute (CCSRI)</td>
<td>Dr. René St-Arnaud</td>
</tr>
<tr>
<td>Canadian Council of Departments of Psychology (CCDP)</td>
<td>Dr. Martin Paré</td>
</tr>
<tr>
<td>Canadian Faculties of Agriculture and Veterinary Medicine (CFAVM)</td>
<td>Dr. Douglas Morck&lt;br&gt;Dr. Marina von Keyserlingk</td>
</tr>
<tr>
<td>Canadian Federation of Humane Societies (CFHS)</td>
<td>Mr. David Buffett&lt;br&gt;Mr. Darren Grandel&lt;br&gt;Mr. Shawn Eccles</td>
</tr>
<tr>
<td>Canadian Food Inspection Agency (CFIA)*</td>
<td>Dr. Gary Halbert</td>
</tr>
<tr>
<td>Canadian Institutes of Health Research (CIHR)</td>
<td>Dr. François A. Auger</td>
</tr>
<tr>
<td>Canadian Society for Ecology and Evolution (CSEE)*</td>
<td>Dr. Albrecht Schulte-Hostedde</td>
</tr>
<tr>
<td>Canadian Society of Zoologists (CSZ)</td>
<td>Dr. Brian Hall</td>
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<tr>
<td>Canadian Veterinary Medical Association (CVMA)</td>
<td>Dr. Patricia Turner</td>
</tr>
<tr>
<td>Department of National Defence (DND)</td>
<td>Dr. Ira Hill</td>
</tr>
<tr>
<td>Environment Canada (EC)</td>
<td>Dr. Laird Shutt</td>
</tr>
<tr>
<td>Fisheries and Oceans Canada (DFO)</td>
<td>Mr. Henrik Kreiberg</td>
</tr>
<tr>
<td>Health Canada (HC)</td>
<td>Dr. Martha Navarro</td>
</tr>
<tr>
<td>Heart and Stroke Foundation of Canada (HSFC)</td>
<td>Dr. Éric Thorin</td>
</tr>
<tr>
<td>National Research Council of Canada (NRC)</td>
<td>Dr. Craig Bihun</td>
</tr>
<tr>
<td>Natural Sciences and Engineering Research Council (NSERC)</td>
<td>Dr. Gregg Adams</td>
</tr>
</tbody>
</table>

* Identifies limited term member
Information Capsules

The following 51 email information capsules were sent to constituents between April 1, 2011 and March 31, 2012:

April 1, 2011: Dernière chance de vous inscrire au webinaire du CCPA sur la formation
April 5, 2011: WC8 Focus for Members of Animal Care Committees
April 5, 2011: Activités d’intérêts pour les membres de comité de protection des animaux, offertes lors du 8e congrès mondial
April 14, 2011: Fellowship Opportunity
April 14, 2011: Bourse de recherche disponible
May 4, 2011: CCAC at CALAS 50th Annual Symposium
May 4, 2011: Participation du CCPA au 50e symposium annuel de l’ACSAL
May 19, 2011: La date limite approche : Bourse de recherche du CCPA sur l’élaboration des politiques relatives aux animaux 2011-2013
June 14, 2011: The WC8: An opportunity for ACC members not to be missed!
June 14, 2011: Le 8e congrès mondial : une chance à saisir pour les membres de CPA!
June 28, 2011: CCAC Digest: June 2011
July 27, 2011: CCAC Digest July Issue
August 11, 2011: CCAC Digest: Animal Welfare for Refinement and High Quality Science - Theme IV
August 11, 2011: Bulletin du CCPA : Le bien-être animal pour permettre le raffinement et pour une science de haute qualité – Thème IV
August 29, 2011: Fourth and final review of the CCAC guidelines on: genetically-engineered animals used in science
August 29, 2011: Quatrième et dernier examen des Lignes directrices du CCPA sur : les animaux modifiés par génie génétique
September 13, 2011: Disruptions to Animal Care Services
September 13, 2011: Perturbations affectant les soins aux animaux
October 27, 2011: 125th Anniversary Congress of the Ordre des médecins vétérinaires du Québec on November 10-12, 2011
October 27, 2011: Congrès du 125e anniversaire de l’Ordre des médecins vétérinaires du Québec du 10 au 12 novembre 2011


October 28, 2011: REMINDER: Fourth and final review of the CCAC guidelines on: genetically-engineered animals used in science


December 2, 2011: CCAC Digest Update

December 2, 2011 Bulletin du CCPA : Mise à jour

December 21, 2011: CCAC National Workshop 2012: Save the date!

December 21, 2011: Atelier national 2012 du CCPA : à inscrire à votre agenda!

December 22, 2011: INVITATION - HPTA Engagement Opportunity - Response Required / Possibilité d’engagement pour la LAPHT – RSVP

January 20, 2012: New Issue of RESOURCE – CCAC’s Information Newsletter

January 20, 2012: Nouveau numéro de RESSOURCE – le bulletin d’information du CCPA

January 27, 2012: CCAC Webinars – Now Even Easier to Access Relevant Training!

January 27, 2012: Webinaires du CCPA – accédez encore plus facilement à de la formation pertinente

February 2, 2012: REMINDER: Only 3 days left to submit your question for the “Safeguards and Service - Striking the Right Balance” webinar!

February 2, 2012: RAPPEL : Plus que 3 jours pour soumettre vos questions au sujet du webinaire intitulé « Mesures de protection et de service - le juste milieu »

February 10, 2012: CCAC National Workshop 2012 - Registration Now Open!

February 10, 2012: Inscription à l’atelier national 2012 du CCPA

February 24, 2012: View the latest additions to the CCAC website homepage

February 24, 2012: Voyez les derniers ajouts à la page d’accueil du site Web du CCPA

February 29, 2012: Don’t Forget to Register to the CCAC National Workshop 2012!

February 29, 2012: N’oubliez pas de vous inscrire à l’atelier national 2012 du CCPA!

March 6, 2012: CCAC webinar: final list of questions and answers / Webinaire du CCPA : liste définitive des questions et réponses

March 15, 2012: There is Still Time to Register to the CCAC National Workshop 2012!

March 15, 2012: Vous pouvez encore vous inscrire à l’atelier national 2012 du CCPA

March 23, 2012: CCAC National Workshop 2012: Only One Week Left to Register and Take Advantage of our $159.00 Room Rate!

March 23, 2012: Il vous reste seulement 7 jours pour vous inscrire et profiter du tarif spécial de 159 $ par chambre

March 29, 2012: CCAC National Workshop 2012: Deadlines Have Been Extended to April 5, 2012!

March 29, 2012: Atelier national 2012 du CCPA : le 5 avril 2012 est la nouvelle date limite
## Secretariat Personnel

### Administration Sector

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Extension</th>
<th>Email</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

### Assessment and Certification Sector

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
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### Guidelines and Three Rs Sector

<table>
<thead>
<tr>
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</tbody>
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### Education, Training and Communications Sector

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
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<td>Charlotte Tellier</td>
<td>Scientific Translator</td>
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