CCAC training module on: genetically-engineered farm animals

Reference and Resource Handout

Note:

This is a list of all the relevant references and resources cited within this module. Animal users should consult relevant experts and scientific literature for the most recent information on the species and techniques under consideration.

Care has been taken to ensure that any provided web links are up-to-date; however, the dynamic nature of the internet may mean that some links will become out-of-date. Therefore, keyword search suggestions are provided for situations in which links to additional resources may be broken. The keywords can be entered into any standard internet search engine.

Slide 1 CCAC training module on: genetically-engineered farm animals

CCAC guidelines on: genetically-engineered animals (in prep.). Visit the CCAC website at www.ccac.ca to access and consult this guidelines document.

CCAC training module on: the ethical use and care of farm animals in science (2010). Visit the CCAC website at www.ccac.ca to access and consult this training module.

Section 9.8 of the *CCAC guidelines on: the care and use of farm animals in research, teaching and testing* (2009). Visit the CCAC website at www.ccac.ca to access and consult this guidelines document.

Slide 4 Training Module Outline

CCAC guidelines on: genetically-engineered animals (in prep.). Visit the CCAC website at www.ccac.ca to access and consult this guidelines document.

Slide 5 Definition of Genetically-Engineered Animals

CCAC guidelines on: genetically-engineered animals (in prep.). Visit the CCAC website at www.ccac.ca to access and consult this guidelines document.

Ormandy E., Schuppli C.A. and Weary D.M. (2009) Worldwide trends in the use of animals in research: The contribution of genetically modified animal models. *Alternatives to Laboratory Animals* 37(1): 63–68.

Slide 6 Factors Compromising the Welfare of Genetically-Engineered Farm Animals

Kaiser M. (2005) Assessing ethics and animal welfare in animal biotechnology for farm production. *Revue Scientifique et Technique de l'Office International des Epizooties* 24(1):75–87.

Kruip T.A.M. and den Dass J.H.G. (1997) In vitro produced and cloned embryos: effects on pregnancy, parturition and offspring. *Theriogenology* 47(1):43–52.

Loi P., Clinton M., Vackova I., Fulka J.Jr., Feil R., Palmieri C., Della Salda L. and Ptak G. (2006) Placental abnormalities associated with post-natal mortality in sheep somatic cell clones. *Theriogenology* 65(6):1110–1121.

Renard J.P., Chastant S., Chesne P., Richard C., Marchal J., Cordonnier N., Chavatte P. and Vignon X. (1999) Lymphoid hypoplasia and somatic cloning. *Lancet* 353(9163):1489–1491.

Van Reenen C.G., Meuwissen T.H., Hopster H., Oldenbroek K., Kruip T.H. and Blokhuis H.J. (2001) Transgenesis may affect farm animal welfare: A case for systematic risk assessment. *Journal of Animal Science* 79(7):1763–1779.

Wells D.N. (2005) Animal cloning: problems and prospects. *Revue Scientifique et Technique de l'Office International des Epizooties* 24(1):251–264.

Wells D.N., Forsyth J.T., McMillan V. and Oback B. (2004) The health of somatic cell cloned cattle and their offspring. *Cloning and Stem Cells* 6(2):101–110.

Slide 7 Regulations

Canadian Food Inspection Agency: http://www.inspection.gc.ca/english/anima/feebet/bio/bfeebete.shtml (Note: if link broken, search: CFIA - Novel Feeds).

CCAC training module on: the ethical use and care of farm animals in science (2010). Visit the CCAC website at www.ccac.ca to access and consult this training module.

Health Canada: http://www.healthcanada.gc.ca/novelfoods (Note: if link broken, search: Health Canada - Genetically Modified (GM) Foods and Other Novel Foods)

Slide 8 Identification & Tracking

Canadian Cattle Identification Agency (CCIA): http://www.canadaid.com/ (Note: if link is broken, please search: Canadian cattle identification agency)

Pig Trace Canada: http://www.pigtrace.ca (Note: if link is broken, please search: pig trace Canada)

Slide 9 Transport

Species-specific codes of practice of the National Farm Animal Care Council website: http://www.nfacc.ca/code.aspx (Note: if link is broken, please search: NFACC codes)

Recommended Code of Practice for the Care and Handling of Farm Animals – Transportation, 2001: http://www.nfacc.ca/pdf/english/Transportation2001.pdf (Note: if link is broken, please search: NFACC codes and select "Transportation (2001)")

Slide 11 Care & Nutrition

CCAC guidelines on: the care and use of farm animals in research, teaching and testing (2009). Visit the CCAC website at www.ccac.ca to access and consult this guidelines document.

Slide 14 Ensuring Optimal Care

Committee on Guidelines for the Use of Animals in Neuroscience and Behavioral Research. (2003) *Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research*. Washington DC: National Research Council of the National Academies.

Slide 15 Ensuring Optimal Care

CCAC guidelines on: choosing an appropriate endpoint in experiments using animals for research, teaching and testing (1998). Visit the CCAC website at www.ccac.ca to access and consult this guidelines document.

CCAC training module on pain, distress and endpoints (2010). Visit the CCAC website at www.ccac.ca to access and consult this training module.

Committee on Guidelines for the Use of Animals in Neuroscience and Behavioral Research (2003) *Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research*. Washington DC: National Research Council of the National Academies.

Expert Panel on Husbandry of Animals Derived from Biotechnology (2001) *A Working Tool for the Assessment of Animal Wellness*. Second Report. Interdepartmental Committee on Livestock and Fish Derived from Biotechnology. Government of Canada.