IMPORTANT: *Questions in Section H have changed affective December 2024. If you are starting a new research AUP application after this date, your application will include the revised version of Section. Proceed to guidance below for H. Description of Procedures (Revised – December 2024).*

Chart below provides an overview of the changes in Section H.

Section H. – Original Version		**Updated Section H. – Revised Questions and Numbers**
1. Does this protocol involve multiple research components or objectives?	→	Removed
2. Provide an overview of your experimental plan by describing the experimental pathway for your research animals.	→ **Revised & Re-numbered**	1. Provide an overview of the experimental pathways in your project.
3. Describe all procedures or techniques performed by your team on live animals.	→ **Re-numbered**	2. Describe all procedures or techniques performed by your team on live animals*
a. Standardized procedures	→	a. Standardized procedures
i. Are there exceptions or lab-specific modifications to the procedure as written in the SOP for any of your research components?*	→ **Revised**	i. Are there exceptions or lab-specific modifications to the procedure as written in the SOP for any of your **experimental pathways**?
ii. Indicate the category of welfare impact for this procedure*	→	ii. Indicate the category of welfare impact for this procedure*
	→ **New**	iii. What is the maximum number of times, with what frequency and over what total duration will a single animal experience this procedure?
	→ **New**	iv. Which experimental pathways make use of this procedure?
iii. Who will perform this procedure?*	→ **Re-numbered**	v. Who will perform this procedure?*
	→ **New**	vi. Provide any other relevant procedural details that are not included above or in the SOP.
b. Lab-specific and other procedures	→	b. Lab-specific and other procedures
i. Procedure Name*	→	i. Procedure name*
ii. SOP approval status*	→	ii. SOP approval status*
iii. Indicate the category of welfare impact for this procedure*	→	iii. Indicate the category of welfare impact for this procedure*
	→ **New**	iv. What is the maximum number of times, with what frequency and over what total duration will a

		single animal experience this procedure?*
	→ New	v. Which experimental pathways make use of this procedure*
iv. Who will perform this procedure?*	→ Re-numbered	vi. Who will perform this procedure?
	→ New	vii. Provide any other relevant procedural details that are not included above or in the SOP.
4. Are you withholding anesthesia for any of your research components that would normally require anesthesia?*	→ Revised & Re-numbered	3. Are you withholding anesthesia within any **experimental pathway** where anesthesia would normally be required? *
5. Are you withholding analgesia for any of your research components that would normally require analgesia?*	→ Revised & Re-numbered	4. Are you withholding analgesia within any **experimental pathway** where analgesia would normally be required? *
6. Scientific endpoints	→ Re-numbered	5. Scientific endpoints
a. What is the maximum experimental duration or scientific endpoint for any single animal?*	→ Revised	a. Describe the scientific and cumulative endpoints for each experimental pathway in your project*
b. Are your chosen endpoints consistent with CCAC guidelines?*	→	b. Are your chosen endpoints consistent with CCAC guidelines?*
7. Describe signs, symptoms, behaviours, measurements, etc. that will initiate humane intervention points and describe the interventions*	→ Re-numbered	6. Describe signs, symptoms, behaviours, measurements, etc. that will initiate humane intervention points and describe the interventions*
8. Animal welfare assessment	→ Re-numbered	7. Animal welfare assessment
a. Describe your plan for monitoring and assessing the welfare of animals in experiments*	→	a. Describe your plan for monitoring and assessing the welfare of animals in experiments *
b. Is your animal welfare assessment plan for experimental animals consistent with CCAC guidelines?*	→	b. Is your animal welfare assessment plan for experimental animals consistent with CCAC guidelines? *
c. Describe your plan for monitoring and assessing the welfare of breeding and/or stock animals not currently in an experiment*	→	c. Describe your plan for monitoring and assessing the welfare of breeding and/or stock animals.
d. Is your animal welfare assessment plan for breeding and/or stock animals consistent with CCAC guidelines?*	→	d. Is your animal welfare assessment plan for breeding and/or stock animals consistent with CCAC guidelines? *
9. List anticipated complications and % of animals expected to experience complications.* Table Headings: • Component • Animal type	→ Revised & Re-numbered	8. List anticipated complications and **the expected rate of incidence (%) within each animal group*** Revised Table Headings: • Anticipated complication • Component (reference only)

• Anticipated complication • Rate(%) • Comments		• Use Category • Pathway ID • Subgroup • Expected % • Comments
10. What is the baseline mortality (%) for each research objective, experiment, or other group of animals described in the protocol?* Table Headings: • Component • Animal type • Mortality (%) • Comments	→ **Revised & Re-numbered**	9. What is the **expected mortality rate (%) for each group of animals in this protocol?** Revised Table Headings: • Component (for reference only) • Use Category • Pathway ID • Subgroup • Expected % • Comments
11. Will any animal experience more than one Category D or E Welfare impact procedure in its lifetime?*	→ **Re-numbered**	10. Will any animal experience more than one Category D or E welfare impact procedure in its lifetime?*

H. Description of Procedures (Revised version – December 2024)

1. Provide an overview of the experimental pathways in your project.
    - An experimental pathway is a specific sequence of procedures that an animal will experience. Your project may have one pathway or many, and there may be connections from one pathway to another.
    - Create a separate row in the table for each distinct pathway that may be experienced by an animal.
    - A pathway ID is automatically assigned for each row added to the table (A, B, C etc.); if an alternate ID designation is preferred (1, 2, 3 etc. or other), the Pathway ID may be edited; if creating alternate IDs, ensure that they are used consistently throughout this section, as pathways IDs are related to questions H.2., H.8 and H.9 as well.
    - Create a separate row for breeding and ensure to record which other pathways will use bred animals in the "connections to other pathways and early endpoints" column.
    - In the "sequence of procedures column", summarize the series of events experienced by an animal:
        - Include non-invasive steps such as growth, aging, and procedure recovery, as well as euthanasia or release
        - Provide detailed descriptions of the procedures below in H.2
        - Provide relevant SOP numbers here to aid in cross-referencing.
    - In the "connections to other pathways and early endpoints column", describe situations where an animal will be transferred between pathways or may not experience the complete sequence of procedures.
    - Experimental timelines and other diagrams are encouraged and may be attached as supporting documents using the upload feature.
    - For reference, see detailed examples of various animal pathways provided in the

application, click on *See examples*....

2. Describe all procedures or techniques performed by your students and/or teaching team on live animals.
   - This question has two parts: part a. covers standardized procedures and part b. covers lab-specific or other procedures.
   - You may need to access the Approved SOP Library to review the standardized SOPs available.
   - Facility and husbandry procedures are covered in Section G, do not include them here.
   - Euthanasia procedures are covered in Section K, do not include them here.
   - For field studies, include observation events in H.2.b.

   a. Standardized procedures:
      - These are standardized procedures performed on live animals which are detailed in UVic SOPs.
      - Choose all that apply to your project from the list provided.
      - **Important**: To select a standardized procedure, click on *Select standard procedure* to open the drop-down list (procedures are listed first by animal, then procedure, and then SOP#).
      - Scroll down the list and select the appropriate procedure, the title and SOP# will auto fill to the row.
      - Each standardized procedure selected has the following additional questions to answer:
        i. Are there exceptions or lab-specific modifications to the procedure as written in the SOP for any of your experimental pathways?
           - If so, provide details in the text box provided when you select *yes*.
        ii. Indicate the category of welfare impact for this procedure.
           - Formerly called "categories of invasiveness".
           - If you are unsure, review the linked CCAC document, many examples are provided.
        iii. What is the maximum number of times, with what frequency and over what total duration will a single animal experience this procedure?
           - Provide details on the number of times per day, and over how many days an animal will experience this procedure.
        iv. Which experimental pathways make use of this procedure?
           - See pathway IDs you provided in H.1
           - Example response: "*This procedure is used in pathways A, C and F.*"
        v. Who will perform this procedure?
           - Research team members listed in Section A of the AUP application will show here in the list.
           - Select a team member by checking the box beside their name.
           - By selecting either specific team member(s) or selecting students, you are confirming that they have the appropriate training to conduct the procedure.
           - You can verify training by clicking on the profile link beside a team member's name and reviewing the completed ACS training (all verified training is listed under the training tab).

vi. Provide any other relevant procedural details that are not included in the responses above or in the SOP.

b. Lab-specific and other procedures
- Detail all lab-specific or other procedures performed on live animals here, in the order they will be performed.
- These will be procedures referenced in H.1 that have not already been listed in H.2.a above.
- Click +*Add new* to add a procedure
- SOPs are an excellent way of standardizing and refining procedures, facilitating training, and expediting AUP submissions - contact animalethics@uvic.ca for more information and guidance on how to develop lab-specific SOPs.
- Each procedure row has several questions:
  i. Provide a procedure name (keep brief and specific).
  ii. SOP approval status.
    - Indicate whether there is an SOP for this procedure or not.
      - If so, indicate the status: ACC approved, new SOP under review by the ACC or an amended SOP under review by the ACC.
      - If you have an SOP#, provide it where indicated.
      - If the status is approved, this is all that is necessary. For any of the other options, provide a summary of the procedure.
  iii. Indicate the category of welfare impact for this procedure.
    - Formerly called "categories of invasiveness".
    - If you are unsure, review the linked CCAC document, many examples are provided which will help you assess the welfare impact.
  iv. What is the maximum number of times, with what frequency and over what total duration will a single animal experience this procedure?
    - Provide details on the number of times per day, and over how many days an animal will experience this procedure.
  v. Which experimental pathways make use of this procedure?
    - See pathway descriptions provided above in H.1, list all that apply.
    - Example response: "*This procedure is used in pathways A, C and F*."
  vi. Who will perform this procedure.
    - Research team members listed in Section A of the AUP application will show here.
    - Select a team member by checking the box beside their name.
    - By selecting either specific team member(s) or selecting students, you are confirming that they have the appropriate training to conduct the procedure.
    - You can verify training by clicking on the profile link beside the team member's name and reviewing the completed ACS training (verified training is listed under the training tab).
  vii. Provide any other relevant procedural details that are not included above responses or in the SOP.

3. Are you withholding anesthesia within any experimental pathway where anesthesia would

normally be required?

- It is expected that appropriate anesthesia is provided for procedures that cause pain.
- If yes: If your project requires withholding (not giving) anesthesia, you **must** provide a scientific justification to the ACC.
- If no: If you are not going to be withholding anesthesia, provide a very brief description of anesthesia use.

4. Are you withholding analgesia within any experimental pathway where analgesia would normally be required?
    - It is expected that appropriate analgesia is provided for procedures that cause pain.
    - If yes: If your project requires withholding (not giving) analgesia, you must provide a scientific justification to the ACC.
    - If no: If you are not going to be withholding analgesia, provide a very brief description of analgesia use.

5. Scientific endpoints
    a. Describe the scientific and cumulative endpoints for each experimental pathway in your project.
        - A scientific endpoint is the earliest point at which the stated objective of the scientific activity will be reached. This could be a terminal procedure, an age, a set time after initiating the experiment, achievement of values of a biological variable, etc. For reference, in the PDF version of the teaching application, the terminology used for this was "experimental endpoints".
        - See CCAC guidelines: Identification of scientific endpoints, humane intervention points, and cumulative endpoints: section 2.1.1 for guidance on determining endpoints.
        - Include maximum age, number of matings and births, experimental duration, and total time housed in animal care facilities.
        - Include maximum number of classes and student interactions.
        - If animals are reused for multiple protocols or donated from another source, describe their previous experiences.
    b. Are your chosen endpoints consistent with CCAC guidelines?
        - If your endpoints are not consistent with CCAC guidelines, you must provide a scientific justification to the ACC.

6. Describe signs, symptoms, behaviours, measurements, etc. that will initiate humane intervention points and describe the interventions.
    - See CCAC guidelines: Identification of scientific endpoints, humane intervention points, and cumulative endpoints: section 2.1.2 for definitions and guidance on choosing humane intervention points.
    - Interventions may include medications, additional health supports, euthanasia, etc.
    - Include details for breeding animals, if applicable.
    - Attach supporting documentation such as morbidity scoring charts, templates, assessments, rubrics, etc. using the upload button below the text box.
    - For reference, a list of signs/symptoms and human interventions are provided in the application, click on *See examples...*.

- Indicate what treatments will be authorized, by whom they will be authorized and undertaken, and how that decision will be made.

7. Animal welfare assessment
    a. Describe your plan for monitoring and assessing the welfare of animals in experiment
        - For further information on welfare assessment see CCAC guidelines: Animal welfare assessment and CCAC guidelines: Wildlife, section 11.
        - Welfare assessment can be combined with other monitoring or experimental activities.
        - Include details on who is responsible, frequency/duration of monitoring, what is assessed, and how, where and by whom assessment data will be recorded.
        - Checklists or templates including species-specific welfare parameters and monitoring points are encouraged, these may be uploaded via the upload button below the text box.
        - Welfare assessment plans for breeding or stock animals must be provided separately in part c.
        - The ACS veterinarian and technical staff can assist with the development of an animal welfare assessment plan.
    b. Is your animal welfare assessment plan for experimental animals consistent with CCAC guidelines?
        - If animal welfare assessment plan for experimental animals is not consistent with CCAC guidelines, you must provide a scientific justification to the ACC.
    c. Describe your plan for monitoring and assessing the welfare of breeding and/or stock animals.
        - See CCAC guidelines: Animal welfare assessment.
        - Welfare assessment can be combined with other monitoring or teaching activities.
        - Include details on who is responsible, frequency/duration of monitoring, what is assessed, and how, where and by whom assessment data will be recorded.
        - Checklists or templates including species-specific welfare parameters and monitoring points are encouraged, these may be uploaded via the upload button below the text box.
        - The ACS veterinarian and technical staff can assist with the development of an animal welfare assessment plan.
    d. Is your animal welfare assessment plan for breeding and/or stock animals consistent with CCAC guidelines?
        - If animal welfare assessment plan for breeding and/or stock animals is not consistent with CCAC guidelines, you must provide a scientific justification to the ACC.

8. List anticipated complications and the expected rates on incidence (%) within each animal group.
    - The institutional veterinarian must be notified of interventions, including if euthanized for a humane intervention point.
    - Provide a separate row in the table for each group of animals that may experience each complication at different rates.

- Be as specific as possible when describing anticipated complications.
- Provide separate estimates for different animal types: breeding, stock, experimental and by-catch animals by adding table rows for each type.
- Examples of complications related to experiments and unrelated to experiments are provided in the application. Click on *See examples…* to open the list.
- Include health conditions that are purposefully induced.
- This number can be estimated based on your experience, from data in the literature, experience of ACS staff members or the veterinarian, or other means.
- The Expected % column should only include complications that will be observed and reported within this protocol. Use the Comments column to provide rates expected after release, transfer, or adoption, if applicable.

9. What is the expected mortality (%) for each group of animals in this protocol?
    - Mortality includes animals found dead or euthanized as a humane intervention point.
    - Mortality does not include animals euthanized at scientific endpoints, for colony size management or for genotype generation.
    - Every mortality must be reported to the institutional veterinarian, including if euthanized for a humane intervention point *(see CCAC guidelines on: Endpoints, section 2.2.3)*
    - The Expected % column should only include mortality that will be observed and reported within this protocol. Use the Comments column to provide rates expected after release, transfer, or adoption, if applicable.
    - Include separate mortality rates for experimental, breeding, stock animals and by-catch if applicable.
    - For field studies, each mortality should receive a post-mortem to determine cause of death

10. Will any animal experience more than one Category D or E welfare impact procedure in its lifetime?
    - Category D: Experiments which cause moderate to severe distress or discomfort.
    - Category E: Procedures which cause severe pain near, at or above the pain tolerance threshold of anesthetized conscious animals.
    - If you are unsure, review the linked CCAC document, for explanations and examples.
    - If any animal will experience more than one Category D or E welfare impact procedure in its lifetime, choose *yes* and provide a scientific justification.