Date: 2/8/2022, 7:19:39 PM | Print | Close

undefinedundefined

A19-0049 **Dairy calf pneumonia prevention (Version 0.0)**

Principal Investigator: Catherine Schuppli

1. Study Team [View Form]

1.1. Please select the Principal Investigator (PI) for the study. The PI is responsible for all aspects of the work conducted under this protocol. Once you hit ..., you can enter the PI's name, or enter the first few letters of his or her name and hit Go. You can sort the returned list alphabetically by First name, Last name, or Organization by clicking the appropriate heading.	**Last Name**	**First Name**	**Rank**	**Online Training**	**Practical Training**
	Schuppli	Catherine	Clinical Assistant Professor	VET105; 20190628-01ABC	VET105
1.2. Provide the name of ONE primary contact person in addition to the PI who will receive ALL correspondence regarding this application. This primary contact will have online access to read, amend, and track the application.					
1.3 Co-Investigators: List all Co-Investigators of the study. These members WILL have online access to read, amend and track the application.	**Last Name**	**First Name**	**Rank**	**Online Training**	**Practical Training**
1.4. Study Team Members All study team members must be listed here and have an up-to-date RISe account, which will contain their online and practical training certificate numbers. Study team members will have online access to read, amend and track the application. Please note that changes cannot be submitted without PI action and consent. All study team members are required to read and adhere to the final approved AUP. The procedures performed by each study team member must be defined in section 4.8b (4.4b Breeding form). To delete a person from the list, click x.	**Last Name**	**First Name**	**Employer**	**Rank**	
	Ratuski	Anna	Land and Food Systems	Sessional Instructor/Lecturer	
Nickname of the Study. What would you like this study to be known as to the Principal Investigator and Study team?	Dairy calf pneumonia prevention				

2. Study Dates and Funding [View Form]

You plan to start your project immediately after obtaining animal ethics and any other required approvals	
You plan to start data collection at a later date e.g. 2 months or more after approvals are obtained. Click the calendar icon below to	2019-02-28

select the dates. Estimated start date:	
2.1 b How long do you anticipate this study will continue?	4 years
2.2. Research Funding Application/Award Associated with the study:	**UBC Number** **Title** **Sponsor**
2.3. Please click Add to enter the details for the research funding application/award associated with this study that is not listed in section 2.2. Research Funding Application/Award Associated with the study not listed in section 2.2:	**UBC Number** **Title** **Sponsor**
2.4. Is the associated research funding application/award listed in sections 2.2. or 2.3. from either industry sources or from internal UBC funding opportunities?	no
3. Animal Information & Type of Animal Review [View Form]	
3.1. Please provide the names of at least two Emergency Personnel with 24 hour contact information by selecting Add. To delete someone from the list, select x. To view additional contact numbers for that person, select the Update button in front of his or her last name.	**Last Name First Name Department/Division Contact Number Alternate Number1 Alternate Number2**
3.2. Please select which of the following Canadian Council on Animal Care (CCAC) keywords that apply to your study using the ... button to view the list. If these do not apply to your study, please select Not Applicable from the list. To delete a keyword from your list, select the x next to the keyword.	Minor Surgery Blood Sampling, Blood Collection
3.3. Purpose of Animal Use:	2
3.4. Please select type of application	Research
3.5.a Is this application a renewal/continuation of a previous study?	no
3.5.b Application number from previous study:	
3.5.c Please select Add button to attach a progress report for the previous study:	
4. Animal Information, Procedures, Justification [View Form]	
4.1.a. Objectives of Research Research Applications: Describe how you would explain to a non-scientist, the aim, specific objective(s) and potential value of your study with respect to human or animal health, the advancement of knowledge or the good of society. Briefly describe the relationship of	Bovine respiratory disease (BRD) remains among the leading causes of death of cattle internationally. Increasingly bull calves, a by-product from the dairy industry, are used for meat production. After weaning calves are often shipped to a farm where they are fed until slaughter. Major calf losses occur due to respiratory disease. The objective of this study was to identify risk factors (diet and antibody levels) associated with exposure to BRD pathogens before and after weaning in dairy bull calves. In addition, we would like to characterize which pathogens are most frequently associated with disease.

the animal studies to the overall objectives of your research. DO NOT exceed 500 words. Teaching Applications: State why animals must be used in the laboratory/project. If alternatives to animals are available, indicate why they cannot be used in this instance.	
4.1.b. As well, please briefly describe in simple language the procedure(s) performed so that the Community Members reviewing this section understand what is being done to the animals. Please do not submit the abstract from your funding application. The summary should provide the requested information in lay terms, so that someone who is unfamiliar with your work will be able to appreciate what you do. DO NOT exceed 500 words.	Calves will be entered into the study before weaning and kept until about 56 days. Calves will have blood collected once before and once after weaning. They will also be fed 3 types of diets (low quality, medium quality and high quality). This will be controlled by automatic milkers and feeders.
4.2. Alternatives to animal use. What alternatives to the use of live animals have been considered? What reasons did you have for rejecting them? If specific alternatives do not exist, this should be stated or justified appropriately.	We have to study this topic in cows within the industry setting so there is no alternative.
4.3. Please complete the following Animal Information by selecting Add. To delete an item listed below, select x.	**Species** **Strain** **Category Of Invasiveness** **Vendor** **Number/Year** **Housing Location** Cow Holstein C Commercial dairy farm 72 Other Institution – Canada
4.4. Justify both the choice of species and strain. List all strains which will be used. Have other species and strains been considered? If a strain exhibits a specific phenotype that affects the animal's welfare over time indicate what changes are expected and when they may arise. Please describe if there are any phenotypic changes that will negatively impact the welfare of the animal. If there are changes, then ensure this is captured in the monitoring information described in section 5.	Holstein cattle are the most commonly used breed in the dairy industry.
4.5. Justify the proposed numbers to be used by indicating how the numbers were determined, explaining why these numbers are needed. To help those reviewing please consider attaching a spreadsheet breaking down the animal use. If you have power calculations justifying the n number for specific experiment and control groups please provide this.	A sample size calculation for linear regression based on a power level of 0.8, significance level of 0.05 and a range of anticipated effects and numbers of predictors suggested a minimum sample of 65 animals. We propose a few extra in case of complications from respiratory disease.The study was structured as a factorial design with three planes of nutrition (high (H), medium (M) and low (L)) and calves were stratified to a nutrition treatment on the basis of live-weight, age at the first day of the study and sire.
If required use Add to attach	

documents, graphs or charts for justification of numbers.	
4.6. Will animals be singly housed during this study for any period of time? If yes, please clearly provide justification and duration. (e.g. a couple of hours following the procedure until the animals are fully recovered; following surgery to prevent the animals from pulling suture (up to 7 days); male mice which are fighting (permanently separated). Please indicate "no" or "NA" if no single housing occurs (i.e. do not leave this section blank).	Calves will be group housed.
** 4.7. Please attach below OR describe your facility SOP(s) on environmental enrichment. If your facility does not have an SOP indicate what your standard environmental enrichment is (e.g. for rodents hiding places/huts, nesting material). If enrichment is not applicable for your study indicate not applicable and the reason, for example field studies.*	Calves are supplied with pen mates and contact bedding for lying down.
SOP(s) on environmental enrichment	
4.8.A. Provide DETAILED description of procedures involving animals. Sufficient detail should be provided so that one can understand what will happen to an individual animal throughout your study. Details of specific procedures can be either detailed here or listed in existing SOPs (see below) but the flow of what will happen to an individual animal throughout the study should be understandable. This section may be supplemented by listing and clearly naming and identifying SOPs and attaching them (in 4.9) or other documents and can also include flow charts and diagrams to help the reviewers of this protocol understand what will be done to the experimental animals. If multiple procedures/treatments are to be done to an individual animal, please clearly explain which animals will have which procedures/treatments and in what sequence. All survival surgery must be done using aseptic techniques. Surgery must be performed within the animal facility in a suite especially designated for this purpose, unless justified as	Keep in mind that these calves are raised on commercial dairy farms that have standard industry practices. Prior to the start of the study, they will have to be castrated. This is done in the way the farm normally does it - calves are castrated surgically with a scalpel. Firm restraint is essential to minimize the risk to calves and operators. Before surgery hands will be washed and using an antiseptic solution. The skin is cleaned with a mild surface disinfectant (such as iodine). An incision is made to open the skin of the scrotum. The testicle is pulled through the incision, and we crush the blood vessels to prevent bleeding and cut the spermatic cord and vessels to remove testicles. Current techniques for local anesthesia during castration are not practical at a herd level so they are not used. Experienced farm staff will perform castration. Food Experiments: Each pen will contain calves of each plane of nutrition. Calves will be fed using automatic milk and grain feeders. Calves will enter the automatic feeders and based on their ear tag, they will receive a specified amount and type of diet (based on experimental treatment). Weight: All calves are weighed at the start of the study and every second day to examine weight and weight gain as risk factors for illness. This requires brief restraint. Temperature: Rectal temperature will be measured every second day. Calves will be restrained for this. Blood Collection: Blood samples were collected from all calves 14 days before weaning and on 14 days after weaning, via jugular vein. Calves will be placed in the head lock and 6 ml of blood will be collected. We will then analyse the blood for response to the presence of the various respiratory pathogens as well as antibody levels and general blood chemistry and white and red blood cell counts.

determined by the Animal Care Committee.	
This section may be attached as a word document, especially when including flow charts and diagrams.	

4.8.B. Identify which procedures, described in 4.8.A, each person listed below will perform. Click each person's name in order to add this information. The UBC rodent training courses completed by each person will autopopulate and will indicate which procedures requiring mandatory training each person has been certified to perform. Give level of qualification or training for each person for the procedures not covered by the mandatory UBC rodent training.

First Name	Last Name	CCAC/NIAUT Training	Training Info						Procedures Performed by Individual
Catherine	Schuppli	VET105; 20190628-01ABC	**Course**	**Species**	**Competency Level**	**Course Condition**	**Certificate Issued**	**Course Procedures**	---
Anna	Ratuski	20200121-01Fa; DAL 103-17	**Course**	**Species**	**Competency Level**	**Course Condition**	**Certificate Issued**	**Course Procedures**	Blood collection, temperature, weighing and managing feed trial.
			IWRR	Mouse	Competent	NC	2020-06-09	Health checking Isoflurane prior to CO2 euthanasia Handling	
			IWRR	Rat	Competent	NC	2017-05-17	Health checking Isoflurane prior to CO2 euthanasia Handling	
			RSCIP	Mouse	Competent	NC	2021-11-19	SQ injections IP injections Restraint	

4.8.C. Please describe morbidity and mortality for each procedure listed above.	Respiratory disease is prevalent at a very high rate in this industry. We expect to see similar rates within our study. Calves may experience coughing, nasal discharge, and lethargy, similar to colds and flu in humans. Some calves may experience more severe respiratory distress. These calves will be euthanized as determined by the farm veterinarian.
4.9.A. Select any UBC ACC SOPs used in the protocol from the drop down list below by selecting the ... button.	**title:** **Code:**
4.9.B. Are you referencing any approved PI specific SOPs in this application?	no
If yes, please attach the SOP(s) here by selecting Add	
4.9.C. For non-ACC approved SOPs and other documents attach here	
5. Animal Monitoring [View Form]	
5-1 Post Procedure Monitoring	Calves will be weighed and temperature taken every second day. In addition clinical assessments were carried out on all calves twice weekly. Respiratory scoring criteria have been developed: nasal discharge (0–3), eye or ear (0–3) score (whichever was greatest), cough score (0–3).
For Categories of Invasiveness D & E and a subset of C, monitoring records are required. Please attach monitoring/scoring records that are to be filled out during the study. These should include humane endpoints.	

5.2. Describe each experimental endpoint for the studies described in this protocol. The explanation should incorporate time and/or condition (such as tumour size or time point following treatment). Death of the animal is not an acceptable endpoint. Experimental endpoints need to be specified for each study or procedure. Please also indicate the MAXIMUM AGE of the animals at Experimental Endpoint (e.g. in weeks, months or years).	Calves will not be euthanized as part of this study. The farm will continue growing the calves until slaughter.
5.3. Humane Endpoints. Describe the potential signs of illness or distress that will result in euthanasia. These should be described for each study or procedure described in this protocol.	All decisions regarding humane endpoints will be made by the farm manager and based on farm standard operating procedures. The farm also has a consulting veterinarian who helps manage herd health. We will not be making decisions regarding euthanasia.
Please attach additional information (including Standard Operating Procedures for monitoring) by selecting Add.	
5.4. The following types of experiments are generally considered to be of a contentious nature. Please indicate if any of these conditions apply to your study by selecting Add and viewing the list. If these do not apply to your study, please select Not Applicable from the list. To delete an item from your selected list, click x.	**Contentious Issues** Not Applicable
5.5. Detail any additional assistance that may be required to ensure that the project will be carried out in a competent and humane manner.	

6. Drugs and Chemicals [View Form]

6.1. ANAESTHETIC/SEDATIVES. Please select Add to enter. To delete an item from the list below, select x.	**Name of Drug**	**Other**	**Dosage**	**Volume**	**Route**
6.2. ANALGESICS and ANTI-INFLAMMATORY AGENTS. Please select Add to enter. To delete an item from the list below, select x.	**Name of Drug**	**Other**	**Dosage**	**Volume**	**Route**
6.3. ANTIBIOTICS. Please select Add to enter. To delete an item from the list below, select x.	**Name of Drug**	**Other**	**Dosage**	**Volume**	**Route**
6.4. OTHER DRUGS, CHEMICALS, BIOHAZARDOUS MATERIALS AND RADIOISOTOPES. Please select Add to enter. To delete an item from the list below, select x.	**Name of Drug**	**Other**	**Dosage**	**Volume**	**Route**
6.5. What are the expected side effects of the					

compounds listed in 6.4 when given at the doses indicated? Identify toxicities that have been identified in the species being studied. If side effects in the animal species that you are using are not known then indicate this; however provide toxicity information that is known in other species if available. As a result of toxicities and/or anticipated toxicities will these animals require special care? If so, please indicate who will provide it and make sure this information is captured in the monitoring process. If you are working with chemicals which require a chemical risk assessment, please attach a copy of your risk assessment here. If you are unsure whether you need a chemical risk assessment, please email researchsafety@rms.ubc.ca or consult the Risk Assessment section on the UBC RMS Chemical Safety Resources page.	
Attach documents here:	
6.6. What will be the ultimate fate of the animals? If euthanasia is planned, describe the method that will be used including drug dosage and administration route. If a physical method of euthanasia is required (for e.g., because the use of drugs is likely to jeopardize the results of the study) scientific justification is required. The technique must be demonstrated to a UBC veterinarian and the viewing certificate attached.	Animals will ultimately be slaughtered for meat as part of the farm's goals.
Attach documents here:	
6.7.a. Will any hazardous materials (chemicals, biologicals, radio-isotopes, infectious agents, radiation/x-rays) be used in the study in vivo? Note: Hazardous chemicals listed in 6.4 should be listed here. All non-fixed animal tissues also require an RG-1 Biosafety Certificate (e.g. Tissues taken for DNA/RNA/protein extraction, tissues for cryosectioning, etc.) should be listed here.	yes
6.7.b. If 'yes', please list the hazardous agents	blood
6.7.c. Certificate Number (Biosafety, Radiation):	nnnnnnn
8. Signatures and Final Page [View Form]	
Please confirm that all associates listed on this study have read and agreed to comply with this study.	
If SOPs have been attached	

or referenced in this application, please confirm that all team members listed in sections 1.3, 1.4, and 1.5 have read the SOPs and they understand, accept and agree to follow the methodological procedures described in those SOPs.	
Please confirm that all study team members are aware that Post-Approval Monitoring, including laboratory visits/viewings, are an important regulatory requirement that the University of British Columbia must meet. Continued protocol approval and renewal are subject to full cooperation with the PAM process and achieving compliance in a timely manner.	
Please confirm that the work described in this protocol is conducted solely for grants listed.	

Print Close