# logo msu

# Application form for consideration of animal ethics and ethics

# For scientific work Mahasarakham university

#

**1. Name of the project requesting the use of animals for scientific work**

**(Thai)**

……………… ... ……………………………………… ... ......... ……………………… .. …………………………… ... …………………………………… ... ……………….… ………………………………. …………… ... ……………… ....................... .................................................. ......................

**(English)** ……………… ... ……………………………………… ... ......... ……………………………… ..… ………………………… ... ……………………………………………………………………………………………………… ............ .................. .................. ................................ .................................................. .............................

   **Name of a large project that has a sub-project that uses animals (if any)**

**(Thai)**

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**(English)** ……………… ... ……………………………………… ... ......... ……………………………… ..… ………………………… ... ……………………………………………………………………………………………………… ............ .................. .................. ................................ .................................................. .............................

2. **Information about animal users for scientific work**

**2.1 Project Leader** (\*\* In case the student is the project leader, Please specify name of thesis advisor)

Name-Surname:

Thai (Mr / Mrs / Miss / Others) ......................... .................................................. .................................................. .........

English (Mr./Ms./ Mrs./Others)…….…………………………………………………………………………………… .. .…………….……........Academic Positions……………………………..……..………………. Other positions …………………………… .. ……………………………….

Education Qualifications............................................... ......... branch specializes ........................................ ......................... .... .... ......

status      ❒teacher ❒faculty officer / institution.

                 ❒Student ❒ Bachelor's Degree  ❒Master's Degree ❒ Doctor's Degree

                  ❒Others, please specify ........................... ..

Contact Location (Department / Faculty / Institute)

……………………………………………………………………………………………………… …………………………………………………………………………………………………………………………………………… ………………………………………………………………………………………………………

Phone ………… ...... ............................ Fax ........................ E- mail: ……………. ……………………………… ..

**Thesis Advisor Principal Name**.................................................. .................................................. ...............................

Position................................................. ............................workplace................... .................................................. .........

Phone .......... .................................. Fax ........................ E- mail: ……………. ……………………………… ..

**2.2 Project participants** (Can increase / decrease according to the number of project participants)

2.2.1) Name-Surname …………………………………………………… .... ……… .Position ……………………… ..… .. …… .. ………………… ..

workplace……………………………….……………………….…….………….…….………………………………… ………………………………….

Phone .......... .................................. Fax ........................ E- mail: ……………. ……………………………… ..

2.2.2) Name-Surname ……………………………………………………… ……….…………Position….……………………..…..……..………………..

workplace……………………………….……………………….…….………….……………………….……………… ………………………………….

Phone .......... .................................. Fax ........................ E- mail: ……………. ……………………………… ..

2.2.3) Name-Surname ……………………………………………………. ...…….…………Position…………………………..…..……..………………..

workplace……………………………….……………………….…….………….…………………………….………… ………………………………….

Phone .......... .................................. Fax ........................ E- mail: ……………. ……………………………… ..

2.2.4) Name-Surname ……………………………………………………. ...…….…………Position…………………………..…..……..………………..

workplace……………………………….……………………….…….………….………………………………….…… ………………………………….

Phone .......... .................................. Fax ........................ E- mail: ……………. ……………………………… ..

**2.3 Person in charge to treat animals for scientific work**

❒Project Leader

            ❒No. m Partner2.2.1  ❒ 2.2.2  ❒ 2.2.3  ❒ 2.2.4

            ❒Other (please specify name-surname / status / contact place) .................................. .................................................. .....

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      **2.4 Experiences in working with animals for scientific work**

(**please attach a copy of the animal use permit for scientific work of animal users**)

            **2.4.1 Project leader**

❒ is an experienced animal user for ........ years                       ❒ no experience

experience.   ❒ teaching  Course name / Course ........................... ...............

❒ Testing project name ........................... ...........................

❒ Research, Project Name ........................... .................................................

❒ workshop Project Name................................................ ......................

❒ Others, specify ........................... .................................................. .................

❒ trained in research ethics in animals for scientific work

     From................................................. ...............................When (specify)............................................... ...........

Animal license number for scientific work ........................ .................................................. ..

                        ❒ never been trained in animal research ethics for scientific work

Currently, the researcher has a number of projects that use animals in their responsibilities. ........................ project

            **2.4.2 Project co worker 1**

❒ the use of animals experienced year .........                       ❒ no experience

experience.   ❒ teaching  Course name / Course ........................... ...............

❒ Testing project name ........................... ...........................

❒ Research, Project Name ........................... .................................................

❒ workshop Project Name................................................ ......................

❒Others, specify ........................... .................................................. .................

❒ trained in research ethics in animals for scientific work

From................................................. ...............................When (specify)............................................... ...........

Animal license number for scientific work ........................ .................................................. ..

 ❒ never been trained in animal research ethics for scientific work

Currently, the researcher has a number of projects that use animals in their responsibilities. ........................ project

            **2.4.3 Project co worker 2**

❒the use of animals experienced year ........           ❒ inexperienced.

experience.   ❒ teaching  Course name / Course ........................... ...............

❒Testing project name ........................... ...........................

❒ Research, Project Name ........................... .................................................

❒ workshop Project Name................................................ ......................

❒Others, specify ........................... .................................................. .................

❒ trained in research ethics in animals for scientific work

     From................................................. ...............................When (specify)............................................... ...........

Animal license number for scientific work ........................ .................................................. ..

             ❒ never been trained in animal research ethics for scientific work

Currently, the researcher has a number of projects that use animals in their responsibilities. ........................project

**2.4.4 The Project attendance 3**

❒ the use of animals experienced year .........                       ❒ no experience

experience.   ❒ teaching  Course name / Course ........................... ...............

❒ Testing project name ........................... ...........................

❒ Research, Project Name ........................... .................................................

❒ workshop Project Name................................................ ......................

❒Others, specify ........................... .................................................. .................

❒ trained in research ethics in animals for scientific work

From................................................. ...............................When (specify)............................................... ...........

Animal license number for scientific work ........................ .................................................. ..

 ❒ never been trained in animal research ethics for scientific work

Currently, the researcher has a number of projects that use animals in their responsibilities. ........................ project

**2.4.5 The Project attendance 4**

❒ the use of animals experienced year .........                       ❒ no experience

experience.   ❒ teaching  Course name / Course ........................... ...............

❒ Testing project name ........................... ...........................

❒ Research, Project Name ........................... .................................................

❒ workshop Project Name................................................ ......................

❒Others, specify ........................... .................................................. .................

❒ trained in research ethics in animals for scientific work

From................................................. ...............................When (specify)............................................... ...........

Animal license number for scientific work ........................ .................................................. ..

 ❒ never been trained in animal research ethics for scientific work

Currently, the researcher has a number of projects that use animals in their responsibilities. ........................ project

**3. Name of project coordinator and responsible person in case of an emergency**

3.1) Name-Surname ………………………………………………… .... .... ...... Position………………………..…..……..…………………..

workplace……………………………….……………………….…….………….…….………………………………… ………………………………….

Phone .......... .................................. Fax ........................ E- mail: ……………. ……………………………… ..

3.2) Name-Surname …………………………………………………………… ….…………Position….……………………..…..……..………………..

workplace……………………………….……………………….…….………….……………………….……………… ………………………………….

Phone .......... .................................. Fax ........................ E- mail: ……………. ……………………………… ..

**4. Name of veterinarian for the unit and veterinarian for the project**

4.1) Name-Surname …………………………………………………… .... ……… .Position ……… ……………… ..… .. …… .. ………………… ..

workplace……………………………….……………………….…….………….…….………………………………… ………………………………….

Phone .......... .................................. Fax ........................ E- mail: ……………. ……………………………… ..

Professional license number ........................... .................................................. ..............................

4.2) Name-Surname …………………………………………………………………………… Position ………………………… ..… .. ......... ……………… ..

workplace……………………………….……………………….…….………….……………………….……………… ………………………………….

Phone .......... .................................. Fax ........................ E- mail: ……………. ……………………………… ..

Professional license number ........................... .................................................. ..............................

**5. Type of project being considered** Please mark **☑**

     ❒new project

      ❒ Existing project Please specify the project code which has been approved ...................

❒Existing projects that have already been approved and need to be amended (Please provide details in Section 5.1)

 ❒No change of protocol                ❒ There is a change in the protocol.Existing

❒ projects that continue to request extension of approval certificates for the operation of raising and using animals.

            (Please provide details in 5.2)

❒No change in Protocol                ❒ There is a change in Protocol

5.1. If it is an original project that has been certified and needs to be amended. Please mark **☑** Amendments

❒ Project name

❒ Project leader

               ❒ Project

Partner ❒ Responsible Person for Working with Animals

               ❒ Project objectives

               ❒ Extension of project time

               ❒ research methodology And techniques for treating animals

❒ Number of animals

❒ Other (specify) .................................. .................................................. .................................................. ........

Please specify the details of the amendment in the section to be edited.

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5.2 If the project is a continuation of the previous project that has been considered ethical and ethical use of animals for scientific work Please explain the similarities and differences of this project and the original project in detail.

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**6. Nature of work that uses animals**

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| --- | --- |
| ❒ **6.1 Research** |   |
|          ❒ General research        ❒ Bachelor / Master / Doctoral research    |
|          ❒ 6.1.1 Basic Research (Basic research)in the                                                     |
| ❒ Behavioral Sciences (Behavioral science) | ❒ Immunology (Immunology) |
| ❒Microbiology (Microbiology) | ❒ Nutrition (Nutrition) |
| ❒ Pathobiology. Pathobiology  | ❒ Parasitology |
| ❒ Physiology         | ❒ Pharmacology |
| ❒ Toxicology | ❒ Anatomy |
| ❒ Biochemistry         | ❒ Neuroscience (Neuroscience) |
| ❒ Biology (Biology)  | ❒ Other (please specify) ............. ...... ... ........................ .. |
| ❒ 6.1.2 Applied research (please specify field)             ………………………………………………………………………………………………………………………………………………… ……………………… .. |
|  |  |  |

|  |  |
| --- | --- |
| ❒ **6.2 Testing and / Monitoring** |   |
| ❒ Food (Food)      | ❒ Herb (Herb) |
| ❒ Drugs (Drug) | ❒-toxic (Toxic substance) |
| ❒ Water (Water)❒ cosmetics (Cosmetic)❒ Other (please specify) .............................. .. .............. | ❒ Vaccine❒ Diagnosis❒ Biologics / Biosimilars |
| **r 6.3 Bio-production (Biologics/Biosimilars)** |
| ❒ วัคซีน (Vaccine) | ❒ เอ็นไซม์ (Enzyme)        |
| ❒ แอนติบอดี (Antibodies) | ❒ คอมพลีเมนท์ (Complement) |
| ❒ อื่นๆ (ระบุ)…………………………..... |   |
| ❒ **6.4 Teaching job (Please specify course code Course names in both Thai and English And teaching level)** |
| subject code…...........................…….…................ ........ Number of credits ... .................................. ................ ...............................Course name (Thai) .................................. ................................. .................. ......................Course name (English) .................................. ................................. .................. ............Teaching level .............................. ...... .................................. .................................................. ....... |
| ❒ **6.5 Academic Services (Specify job / project name And departments that receive academic services)** |
| Name of job / project ... .................................. .............. ................................................ ................................................ ...........Agencies that receive academic services ... .......... ...................... .......... ........................ ...................... |
| ❒ **6.6 Breeding and breeding of animals** |
| Name of job / project ... .................................. .............. ................................................ ................................................ ...........Agency that wants to breed and breed animals. ............... ......................... .......... ..................... ............. |
|  |  |  |

**7. Funding source / budget**

Project start ………………………………… .. (Date) End of project ........................... (Date)

          Total duration ........................... (Date)

❒ funding

                                      Funding received .................................................. .................................................. .............................

                                      Budget received ........................... .....baht

                                      Funded duration ………………………………….(Month year)

                                      ❒ is submitting a request

                                      The funding source being requested …………………………………………………………………… ........................ ...........

                                      Budget submitted for request ........................... ...baht

                                      Time period to submit a scholarship ……………………………..(Month year)

                                      ❒ private

                                      funds, funding sources received .................................................. .................................................. .............................

                                      Budget ........................... ...................baht

                                      Funded period ……………………………..(Month year)

**8. Introduction to theory, hypothesis and project framework** (Provide general information Went from reviewing the literature related to this project to understand why this project was to be Help understand the importance of the project and ensure that no duplicate research is performed and no other means are used instead of animals With the reference document being reviewed)

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**9. Objectives of project** (Specify objectives that must be achieved from the implementation of this project Which must be consistent with the title And methods of education)

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**10. Reasons to use animals (**Revealing the necessity of implementing the project in accordance with the animal use ethics for scientific purposes and 3Rs principles, with reference to the end)

**10.1 There are other methods that may be used. Instead of animals? And give reasons as to why other methods are not used instead of animals (Replacement)** (shows the reason for the need to use animals and information / evidence showing that there is no other way to replace animals)

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**10.2 If there is a reason why it is necessary to use experimental animals and not be able to use alternative methods What are your methods or guidelines for reducing the number of experimental animals to a minimum? (Reduction)**

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**10.3 How have you treated animals? For the least pain to the animals (Refinement)**

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**11. Benefits to humans or animals Expected academic benefits, science, technology and innovation** (Showing how useful the project is to Create new knowledge in biological science, medicine, public health and agriculture, which can be applied to science and technology or to improve the quality of life of people, animals, environment, society and economy)

**11.1 Summary of benefits to humans or animals**

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**11.2 Summary of benefits for academic progress**

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**11.3 Summary of science development benefits Technology and innovation**

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**12. Information about animals used in the project**

      **12.1 Animal type**

❒ Mouse        ❒Rat         ❒hamster  ❒ Guinea pig      ❒Rabbit

❒ Dog             ❒ Pigs              ❒ Cows               ❒Goats             ❒ Sheep

❒ Fish             ❒Shrimp                ❒ Crabs                 ❒ Insects            ❒ Earthworms

❒ Genetic

❒ animalsspecial conditions such as pregnant / breastfeeding / spay / castration / hysterectomy etc

❒ Other (please specify) ....... ..............................

**12.2 Animal species**

❒ Outbred strain Species name ……………………………………… ❒ Inbred strain Name of species …………………………… ..

❒ Mutant species names ……………………………… ... ………… .. ❒Transgenic    r Knockout    r Knock in

❒ Hybrids between species and strains ……………………. ❒ Others (please specify) …………………… ......

**12.3 Gender** ❒ who          ❒ wife

**12.4 Age** …………………… .. weeks ..................... months ……………… days

**12.5 Weight** …………………… grams ........................ kilogram

**12.6 The period of use of animals throughout the project**

 begins ………………………………… .. ………… (Date) End ............................... ..... (Date)

          Total duration ........................... (Date)

**12.7 Number of animals used throughout the project** ……...............body (Shows the principles for determining the number of animals Appropriately using statistical principles)

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**12.8 Why choose animals for this kind of scientific work in the project? Have studied before? As well as criteria for determining the number of animals for scientific use** (Presenting a review of relevant literature and identifying references or relevant evidence to justify and the necessity of using animals for scientific work, both species and this number in the project)

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**13. In case it is necessary to use protected wild animals, conserved wildlife, nature animals, pets must also specify reasons and necessity as to why other types of animals cannot be used and fill in animal information in Article 12. In the case of necessity Use protected wild animals. Preserved wild animals must specify what types of protected wild animals and how to comply with the provisions of laws and policies regarding Fully and strictly related By attaching a copy of the Wildlife Conservation Wildlife Sanctuary Protection License, present to the NSF, before proceeding.**

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**14. Animal production / source of origin for scientific work used in the project**

**14.1 Place of production / source of animals (Specify the production license number ..................... / if any)**

          ❒ cultivate and propagate by oneself in the organization Faculty or institution, specify origin

........................... .................................................. .............................................

❒ ordered from the source Foreign species breeding Specify the source ........................... .................................................. ..........................................

❒ Order from other breeding areas within the country Specify the source ........................... .................................................. ..........................................

❒ Example from certified research (Specify project code ............................ certificate number ............... ..................)

❒ Donated animals or animals owned by the owner (**attach donation documents or consent from the owner**)

❒ other (specify) ……………………………………………………………………………………………………………………………….

**14.2 Quality of animals from production / origin**

❒ There is evidence showing a breed. And the genetic stability of the breed that needs to be inspected

❒ There is evidence that strict hygienic conventional systems

❒can be petThere is evidence to be confirmed as a pet with a special sterile system (SPF). System)

(Specify the type of infection ......... ......................... .................. ................................. ..)

❒ evidence to verify that the animals are fed with sterile integrity (Germ free system)

❒ no evidence or document process. D

❒ Other (please specify) ................................................................................................................................. ……….

    **14.3 Potential of the place of production / origin of animals**

❒ There are methods of breeding that show that the desired species can be bred in all forms of sex, age, weight and quantity as required.

❒ The service can be delivered using standards. International Animal Transport

❒Other (please specify) …………………………………………………………………………………………………………… ……………….

**15. Transport animals for scientific work to laboratories and animal preparation before the start of the project.**

      **15.1 Transporting animals for scientific work (Answer: only if animals are transported from outside the university)**

❒  with temperature control

❒  with adequate ventilation

❒  with prevention of infection

❒  containers for animals are stable and strong (specify type, size and type of container)

... ... .................. .................................................. ....................................................

❒  there is enough space(Specify the size of the area) ........................... ................................ ....... ... ... ……………………………………………………………………………………………… ..

❒  destination within 1 day (specify location Shipping Location Pick up Date-Time Pick-up With the document attached to the transportation of animals)

 ........................... .................................................. .................................................. .........................

❒  other (specify) ................... .................................................. .................................................. ...................................

**15.2 Preparing animals for scientific work before the start of the project**

❒  There is a deworming. Name of anthelmintic drug ................ number ......................... time ................. ..Date …………………… week

❒   There is an injection or vaccination, vaccine name ........................ amount .... ............... times ................... days .................. week

❒   animal breaks periodically Time ................... Day .................. week

❒   Other (specify) ……………………………………… …………………………………………………………………………………………… ..

**16. Place of raising and using animals for scientific work of the project**

❒Animal Center Mahasarakrm university

Document number, place of registration for animals for scientific work ………………………………………

           ❒other agencies please specify.……………..…………………….…………………………………………………………..

Document number, place of registration for animals for scientific work ……………………………………………

**17. Environment of animal raising for scientific work**

     **17.1 Animal raising standards for scientific purposes**

❒  Not systematic / natural release (Non-conventianal / Natural habitat)

❒  Conventianal

❒  Strict Hygienic Conventional (SHC)

❒  Specified Pathogen Free (SPF)

❒  Germ Free

❒  SystemBiohazard Containment

❒  Animal Biosafety Level (ABSL) 1, 2, 3, 4)

❒  Others (specify) …………………. …………………………………………………………………

**17.2 Room environment / laboratory location for scientific work**

❒  Temperature  ............. Degrees celsius

❒  relative humidity .......... ...%

❒  illumination .................Lux or .................... Footcandle,

day-night lighting ratio ............... Continue hours ............... Hours

❒  No noise

❒  No foul smell disturbing

❒  Good ventilationGood

❒  systemelectrical and water supply system

**17.3 Cages / pens / animal raising areas for scientific purposescages**

❒  Animal........................ .. m

❒  cage hanging (Hanging cage) ........................ .. ma

❒  cage-type Metabolic cage size ........................ .. square meters.

❒  rectangular cage (Shoebox), size (length X width X height) ...................... ... ... ... cm

made ofmaterials, r stainless steel  r plastics  r Other (please specify) ..... ...........................

❒  other (specify).................. .................................................. ..............................

❒  Number of animals Raise .......... ..... ...... Cage / Cage / Cage

     **17.4 Scientific**

**food 17.4.1 Types of food**

❒  Commercial pellets

❒  Sterile diet

❒  Ground food special formula

Food testing substances Chemical compound in food (Compound supplemented)

❒ (Name and source of production) ………. ……………………………………………………………. ……… r No

❒  other(specify) ……………. …………………… .. ………………………………………

**17.4.2 form offeeding**

❒  a feeding rate has to eat all the time*(Ad*libitum)

❒  the timing and amount of food (Food restriction)

for the period ......... ........................ times / hour

Number of giving ............................ times

Giving amount ........................... ....... g

❒  Others (please specify) ……………………. ………………… ... …………………………………

  **17.5 Scientific**

**water 17.5.1 Type of water**

❒  Tap water

❒  RO water

❒  chlorinated water …………………………… ppm

❒  Others (specify) …………………………………………………………………………………

**17.5.2 Irrigation**

❒  Routine feeding (Ad libitum)

❒  Specifying water restriction and

time of giving ......... ........................ times / hour

Number of giving ............................ times

Giving amount ........................... ....... l

❒  Other (please specify) ........................... .... .............................. ............. …………… ..

**17.5.3 How towater**

❒  by filling a water bottle with a stopper and tubing

❒  by means of an automatic irrigation system

❒  Other (please specify) ................................................ ............. ………………………

**17.6 Sleeping material used for raising animals for scientific work**

      **17.6.1 Type of sleeping mat**

❒ Wood shavings

❒Sawdust

❒ Paper

❒ Sterile bedding

❒ Other materials (Specify) .......... .. ………………… ......................... .................................................. ........

❒ not use sleeping pads

            **17.6.2 Secondary material changesleeping**

❒ every other day

❒ every 2 or 3 days

❒ a week, every

❒ other... ................... .................. …………………………… .. ………

**18. Project implementation period**

            ❒ as per project proposal form

                Start date ..................... end date ..................................................

❒ as the actual operation (If the date specified on the proposal is not the same)

                Start date ..................... end date .................................................. .

**19.** **Research methods related to animals for scientific work.**

**19.1 Research design (Experimental Design)**

19.1.1 Statistical principles or methods used in research design Calculation andsize determination

          sample(specify details)

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## 19.1.2 Segmentation of experimental groups divided into .......... ...... trial group Each group .......... ...

##          (Specify details)

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**19.2 Please specify the procedures and methods of animal testing in detail.** Regarding the testing of substances, animal asthma, surgery, pre and postoperative care Sampling from animals Animal husbandry And caring for the animals throughout the experiment, etc. (If the steps and methods of the experiment, especially the processing of animals, are complicated, please write a Flow Chart)

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**19.3 Please specify the statistical principles and methods used in analyzing the experimental results of the project.**

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      **19.4 Details of reference documents cited above** (author's name, title, journal name, year of publication, volume, page ...)

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**20. Methods and techniques of operating with animals for scientific work.**

      **20.1 Specify methods and techniques for treating animals that you must use to treat animals in the project.**

            ❒ Capturing and controlling animals                                      ❒Collecting samples from animals

            ❒ sex separation                                                   ❒asphyxiation

            ❒ Animal markings                                ❒ Peaceful Death (Euthanasia)

           ❒Substance                                                      ❒ Surgery (aseptic techniques)

❒ Stress and pain relief of animals     ❒Transport of animals outside the operation

❒ Necropsy                                     ❒Other (Specify) .... ...........................

**He has experience in making methods and techniques. With the animals used in the project**

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**20.2 The substance and the quantity of the animals used inProject.**the         ❒ none             ❒ Yes (specify)

            Substances ........................... Give oral (by method .......................                     Quantity (specify units) ...............

            Substances ........................... Skin layer (Intradermal) at the injection site                      Quantity (specify units) ...............

            Substances ........................... Get under the skin (Subcutaneous) injection site               Quantity (specify units) ...............

            Substances ........................... Intramuscular (Intramuscular) injection site                Quantity (specify units) ...............

            Substances ........................... Intraperitoneal area at injection site                volume (specify unit) ...............

            Substances ........................... Intravenously (Intravenous) blood vessels that use         volume (specify units) ...............

            Substances ........................... Other (please specify                                                   Quantity (specify units) ...............

**20.3 Surgery, Practice Before and After Surgery By aseptic techniques**             ❒ none             ❒Yes (Specify)

If surgery or implantation of tools or equipment in animals is performed Specify the name of the veterinarian who supervises Or the veterinary license number And can be checked at the Veterinary Council

**Name-surname and professional license number of the veterinarian who supervises the animal-processing techniques of the project**

………………………………………………………………………………………………………………………………… .................................... ..

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             **20.3.1 Specify the nature of the surgery.**

                        ❒ Minor surgery                       ❒Major surgery

                        ❒ Survival surgery                    ❒Non Survival surgery

                       ❒Single surgery                        ❒r Multiple surgery

**20.3.2 Specify procedures and details about surgery,** such as animal asphyxia, surgery, pre and postoperative care, etc. If complicated, please write a flow chart consisting (\*\*\* In the case of surgery, the sterile technique must be told. Surgical site, surgical method, sutures, if any) with the name of the person responsible for the surgery and experience)

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**20.4. Stress relief and pain in animals**

**20.4.1 Identify the criteria for the classification of pain and suffering in the experimental animals** (USDA pain and distress categories). The experimental animals used in the research are in the following groups

❒ Group B: Experimental animals are breeding, breeding, cultured for use in teaching, testing, experimentation, research or surgery. But not yet implemented for those purposes There Observing animals in natural living conditions

❒ Group C: animals being used in research that does not cause pain and suffering. The pain and suffering momentarily. Or caused only a small amount of pain and suffering Without the need for drugs to reduce pain

❒ Group D: animals were used in research to cause pain. Great suffering Anesthesia is necessary. Analgesic or sedative

❒ Group E: animals were used in research to cause pain. Suffering By not being able to give general anesthesia, analgesics or sedatives Scientific reasoning must be supported and approved by the Animal Research Ethics Subcommittee.

**20.4.2 Identify methods to relieve stress and pain.** In the event that it is necessary to cause the animal pain but without

          Soothes the pain for the animals Please clarify the reason.

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**20.5 Anesthetic and analgesic**

**20.5.1 Specify the type, trade name, properties, size used, method of drug administration, duration of drug action.**

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        **20.5.2 Identify methods to determine if an animal is at an appropriate level of asphyxia**

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**20.5.3 Specify cases of continuous use of anesthesia from surgery to kill animals in peace.**

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     **20.6 Collection of blood samples from animals used in the project**              r none              r Yes (specify) the

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **type of blood collection** | **Types of vessels and the storage location** | **used doping /****drug** | **dosage,****collection,storage** | **frequency****of** |
| ❒ from the vein.       (Venous blood) |   |   |   |   |
| ❒ from the arteries      (Arterial blood) |   |   |   |   |
| ❒ punch from the heart      (Cardiac puncture) |   |   |   |   |
| ❒ อื่นๆ (ระบุ).................................................. |   |   |   |   |

In the event that anesthetic is used while collecting blood samples Specify the name of doping, duration and dose

      .................................................. .................................................. .................................................. ..................................

      .................................................. .................................................. .................................................. ..................................

      .................................................. .................................................. .................................................. ..................................

     **20.7 Collection of other samples From the animals used in the project**

**20.7.1 Sampling of tissue or organ fragments** ❒ None              ❒ Yes (Specified)

|  |  |
| --- | --- |
| ❒Collect while animals are alive | ❒ Collect after the end of the experiment |
| Tissue parts / Organ storage / Other | Tissue parts / Organ storage / others |
| 1. ............................ ..................... Amount .................. ........... | 1. ..................... .............. Amount ................. ........... |
| 2. ..................... ............ Amount ................... ...... | 2 ............... .............. Amount ................. ....... |
| 3. ..................... ............ Amount .................. | ...... ......... .............. Quantity ......... ………………… |

**20.7.2 Collection of stool samples**                    ❒ none                         ❒Yes (specify)

                        Use methods ........................... .................................................. .................................................. ....

                        volume................................................. .................................................. .................................................. ..

                        Storage time ........................... .................................................. .................................................. ....

                        Types of cages or materials that help to collect samples ........................... ...........................

**20.7.3 Collection of urine samples**                   ❒ none                         ❒ Yes (specify)

                        Use methods ........................... .................................................. .................................................. ....

                        volume................................................. .................................................. .................................................. ..

                        Storage time ........................... .................................................. .................................................. ....

                        Types of cages or materials that help to collect samples ........................... ...........................

**20.7.4 Specify special operations And special equipment that is used to treat animals** Including specifying the name of responsible person

          Use special equipment and experience (if any) (special equipment such as Ultrasound MRI and X-Ray etc.)

………. ……………………………………………………………………… ……………………………………………………………………………………… .. ……………………………………… …………………………………………………………………………………………………………………………………………… …………………………………………………………………………………………………………………………………………… ………………………

**20.8 Transporting animals to off-site operations and processing (if any)**

**20.8.1 Specifying the reason for the need to move the animals to use off-site.**

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**20.8.2 Specify the location where animals will be used**

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**20.8.3 Time of use of animals**

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**20.8.4 Methods of moving animals out of the rearing facility**

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**20.8.5 Methods of handling animals after the end of use**

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**20.9 End of experiment (Experimental Endpoint)**

**20.9.1 Specify the criteria for considering the Early Endpoint ()**

...………………………………………………………………………………… ……………………………………………………………………………………… .. ……………………………………… …………………………………………………………………………………………………………………………………………… …………………………………………………………………………………………………………………………………………… ………………………

**20.9.2 Specify the criteria for determining the end point of an experiment to cause the animal to die in peace during the experiment without having to wait for the animal to die itself (Humane Endpoint)**

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**20.9.3 Specify the reason for using the death as an endpoint**

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**20.10 Euthanasia**

**20.10.1 Specify methods, equipment, places, and reasons for killing animals in a peaceful manner according to established standards and**

**evidence.**

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**20.10.2 specifying methods for detecting animal deaths**

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**20.11 Necropsy**

**20.11.1 Specify methods, equipment, places and prevention of spread of pathogens in carcass extraction.**

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**21. Treatment of animals after completion of the project**

      **21.1 Treatment of animals after completion of the project**

            ❒ animal dies after surgery or specimen collection

            ❒ The animals are still alive after the project is completed.

**Specify actions on live animals after the end of the project.**

❒cause the animal to die in peace

                        ❒ Using animals in other projects

                       ❒Others (specify the method and reasoning)

.......... ………………………………………………………………………………………………… …………………………………………………………………………………………………………………………………………… …………………………………………………………………

            ❒ Injection / inhaled anesthesia exceeded the limit (Specify type / quantity ........................... ..........................)

            ❒ Cervical dislocation

            ❒ Carbon dioxide inhalation

            ❒ Using the guillotine to cut the head

           ❒Shooting with a gun

           ❒Others (specify) ........................... ..................................

            ❒ If no animals are killed in peace Please specify the method of handling the animals after the end of the experiment.

            .................................................. .................................................. .................................................. ..................................

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 **21.2 Treatment of carcasses and waste after the project is completed** (Please specify the method in detail)

**21.2.1 Specify the method of collection and disposal of animal carcass. Biopsy and used material To prevent the spread of pathogens, pollutants to the environment**

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**21.2.2 Identify equipment to prevent danger to operators. Prevention of the spread of toxins / pathogens (if any)**

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**21.2.3 Identify devices to prevent the spread of toxins / germs.** ………………………………………………………………………………………………………………………………… ……………………………… .. ………………………………………………………………………………………………… …………………………………………………………………………………………………………………………………………… ………………………………………………………………………………………………………

**21.2.4 Specify equipment to prevent danger from operation with animals.**

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**Testimonials**

hereby undertakes to abide by the method proposed in the project. Don't give up Ensure that the amount of water and food sufficient for the needs Strictly prevent infection and spread of infection in accordance with established operating standards. And certifying that animals are used as efficiently as possible By recognizing the value of life and morality according to religious principles And will cause academic benefits or quality of life development Requires the least amount of animals to produce Highest accuracy Must deal with animals in a way that does not cause unnecessary stress or pain to the animal. As well as willing to supervise and promote the operation of animals for scientific work Mahasarakrm university Can track and check If you have any changes Other than those listed on the Scientific Research Ethics Application Form for Scientific Research Commission for the Promotion and Proceeding of Animals for Scientific Work Mahasarakrm university Will not endorse any

sign................................................. ... Head of Research Project

      (...........................) ...........)

Date ......... Month .......................... ................. B.E. ........................

sign................................................. ... chairman of thesis advisor committee

                 (...........................) ...........) (In the case that the project leader is a student)

Date ......... Month ................... ........................ B.E. ........................

sign................................................. ... Head of Department / Department

      (...........................) ...........)

Date ......... Month .......................... ................. B.E. ........................

**(The applicant submitting the Form Sor Mor Jor. 62, 3 sets, the complete research project or the project proposal, and 3 CD-records, containing all document and research data in the form of Word document file** and **PDF file, amount 1 Sheet and requesting to add details in the form completely))**

**"Information will be kept as confidential documents"**

 NOTE : Mahasarakham University (Animal Ethics Committee) will consider the qualifications of the applicant for consideration as follows :

**1. Project leader or animal user Must have animal user licenses and have prior animal training experience before operating with animals.**

**2. Students operating under the control of a licensed user of animals Must pass training for raising and using experimental animals in accordance with the code of conduct for animals for scientific work organized by the National Institute of Science and Technology.**