

## Rationale

- 1) In this section of the protocol, you will:
  - a. Describe your research objectives over the *three-year period* of the protocol.
  - b. Provide a rationale for animal use.
  - c. Demonstrate and justify how you determined the number of animals you are proposing to use for the *three-year period* of the protocol.
- 2) As you answer the questions in this section, please use language that can be understood by a layperson. Avoid overtly technical terms and define abbreviations.
- 3) If this is a three-year *de novo* submission of an existing Animal Use Protocol (AUP), check the **de novo** box.
- 4) If this eProtocol submission is replacing your “paper” AUP, write in your “paper” **AUP number** for reference.
- 5) **Justification of Animal Numbers**
  - a. For guidance on how to complete the section on **Justification of Animal Numbers**, please refer to the ACUC guidelines on [Justification of Animal Numbers](http://acuc.berkeley.edu/guidelines/justification_animal_numbers.pdf) found on the ACUC web site: [http://acuc.berkeley.edu/guidelines/justification\\_animal\\_numbers.pdf](http://acuc.berkeley.edu/guidelines/justification_animal_numbers.pdf).
  - b. This part of the protocol describes for reviewers how you determined that the numbers provided in the Species section of this protocol are the smallest number of animals needed to fulfill the study goals over a three-year period.
  - c. You will start by describing the experiments (studies) included in your protocol and how many animals will be used for each experiment **for the three-year period of the protocol**.
    - i. Click on **Add** to add each experiment

3. JUSTIFICATION OF ANIMAL NUMBERS

For complete instructions and guidance on how to complete the section on justification of animal numbers, please refer to the ACUC guideline on [Justification for Animal Numbers](#) found on the ACUC website.

a) How did you determine that the numbers provided in the Species section of this protocol are the smallest number of animals needed to fulfill the study goals over a three-year period? Please use the table below to graphically describe for reviewers how you arrived at your animal numbers. Regardless of species, please briefly describe the Experiments included in your protocol and complete the table below, **FOR THE THREE-YEAR PERIOD OF THE PROTOCOL**. Note: Experiments may consist of multiple procedures. For breeding colonies, enter these as a line item, with the total consisting of breeding stock plus offspring NOT used in any studies.

Animal Groups for Procedures	Add
Please click on Add to add Animal Groups for Procedures	

Click **Add** to describe how you determined the animal numbers that will be used in the experiments conducted over the **three-year period** of the protocol.

- ii. In the pop-up window, briefly describe the **experiments** that will performed over the **three-year period** of the protocol. Note: experiments may consist of multiple procedures. You will describe the procedures in another section of the protocol.

Note: \* denotes mandatory field.

Click to **Save**

Animal Groups for Procedures		Save   Cancel
Experiment *	neuronal activity in water maze w/wo drugs	
Maximum number of groups (Control) *	1	
Maximum number of groups (Experimental) *	2	
Maximum number of animals per group *	5	
Maximum number of replications needed *	1	
Total number of animals needed *	15	
<small>Note: (total # groups, control &amp; experimental) X (# of animals per group) X (# of replications needed) = Total # of Animals Needed.</small>		

- Describe the **experiment**.
- Enter how many **groups** will be needed.
- Enter how many **animals** per group.
- Enter how many times the experiment will be **repeated**.
- Calculate **Total Number of Animals** needed over the **three-year period** of the protocol.

- iii. Enter the **maximum** number of **control groups** that will be used in these experiments over the **three-year period** of the protocol.
- iv. Enter the **maximum** number of **experimental groups** that will be used in these experiments over the **three-year period** of the protocol.
- v. Enter the **maximum** number of **animals per group** that will be used in these groups over the **three-year period** of the protocol.
- vi. Enter the **maximum** number of **replications needed** (i.e., how many times you will repeat this experiment) over the **three-year period** of the protocol. For example, if you will be screening several test compounds using the same experiment, use the maximum number of compounds that you will screen over the three-year period of the protocol.
- vii. Enter the **Total Number of Animals** needed over the **three-year period**. This is:  

$$[(\# \text{ of control groups}) + (\# \text{ of experimental groups})] \times (\# \text{ of animal per group}) \times (\# \text{ replications})$$
- viii. For breeding colonies, enter these as a line item, with the total consisting of breeding stock plus offspring NOT used in any studies.
- ix. Click **Save**. Repeat for each experiment.

Animal Groups for Procedures						Add   Delete
	Experiment	Maximum number of groups (Control)	Maximum number of groups (Experimental)	Maximum number of animals per group	Maximum number of replications needed	Total number of animals needed
<input type="checkbox"/>	<a href="#">Neuronal activity in water maze w/wo drugs</a>	1	2	5	1	15
<input type="checkbox"/>	<a href="#">Neuronal activity in T-maze w/wo drug</a>	1	2	10	2	60
<input type="checkbox"/>	<a href="#">Neuronal activity in Roto-Rod Test w/wo drug</a>	1	4	5	2	50

- x. The total number of animals needed over the three-year period of the protocol listed in the **Justification of Animal Numbers** should coincide with the totals listed in the **Species** section of the protocol. In the example above, the total animal usage is 125 animals and this should correspond to the total number of animals listed for all species in the Species section of the protocol.
  
- d. Provide a narrative justification for the proposed number of animals being used. Note: group sizes are expected to represent the minimum number of animals needed to achieve the goals of the experiment.
  
- e. Select the method(s) used to determine group size (select all that apply).
  - i. Please refer to the ACUC guidelines on [Justification of Animal Numbers](#) for more detailed guidance.
  
  - ii. References and citations can attached in the **Attachments** tab found under the **Protocol Information** section of the protocol.