

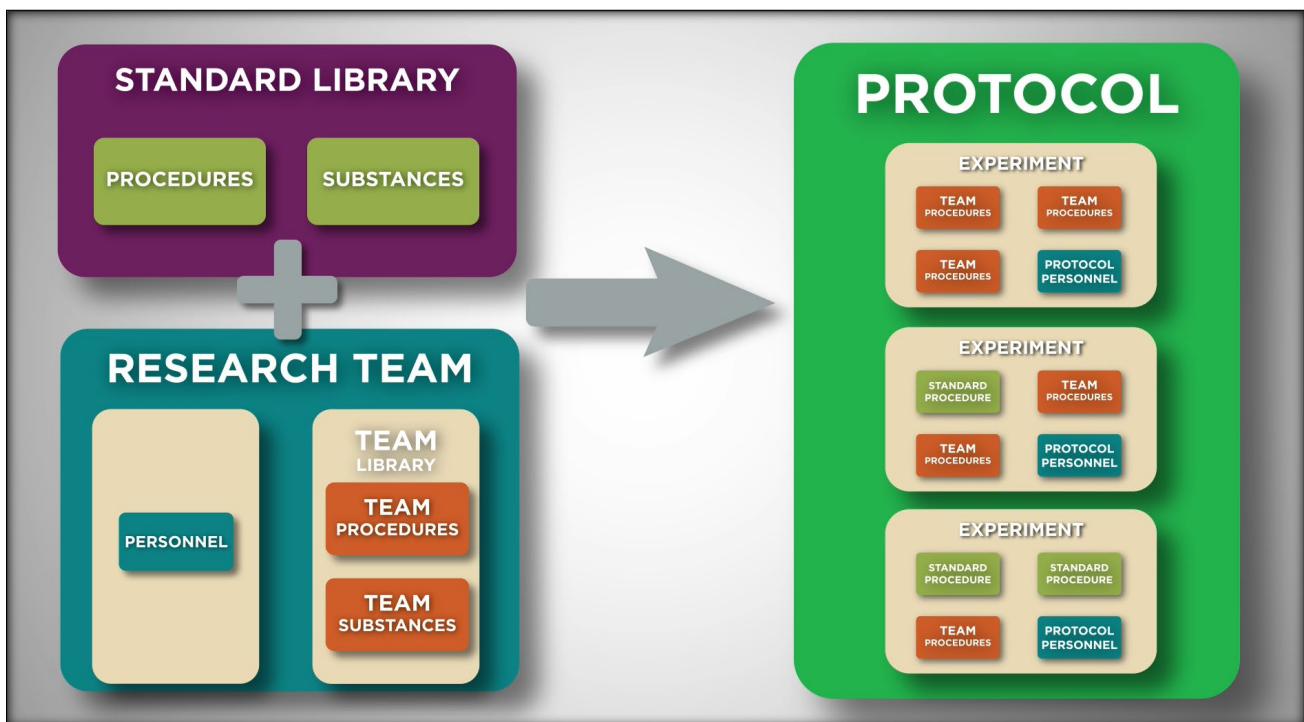


## Click IACUC: Substances, Procedures, and Experiments

The objective of this quick guide is to help Principal Investigators understand how to work with substances, procedures, and experiments within the Click IACUC module.

### 1. Building Block Concept.

Within the Click IACUC module, the protocol construction process is based on the building block approach. To create a protocol, a Principal Investigator (PI) builds experiments based on the substances and procedures involved, then combines the experiments into a comprehensive research protocol. There are standard substances and procedures approved by the IACUC and ready for use by PIs. PIs can also create their own substances and procedures, which the system labels as team substances and team procedures.



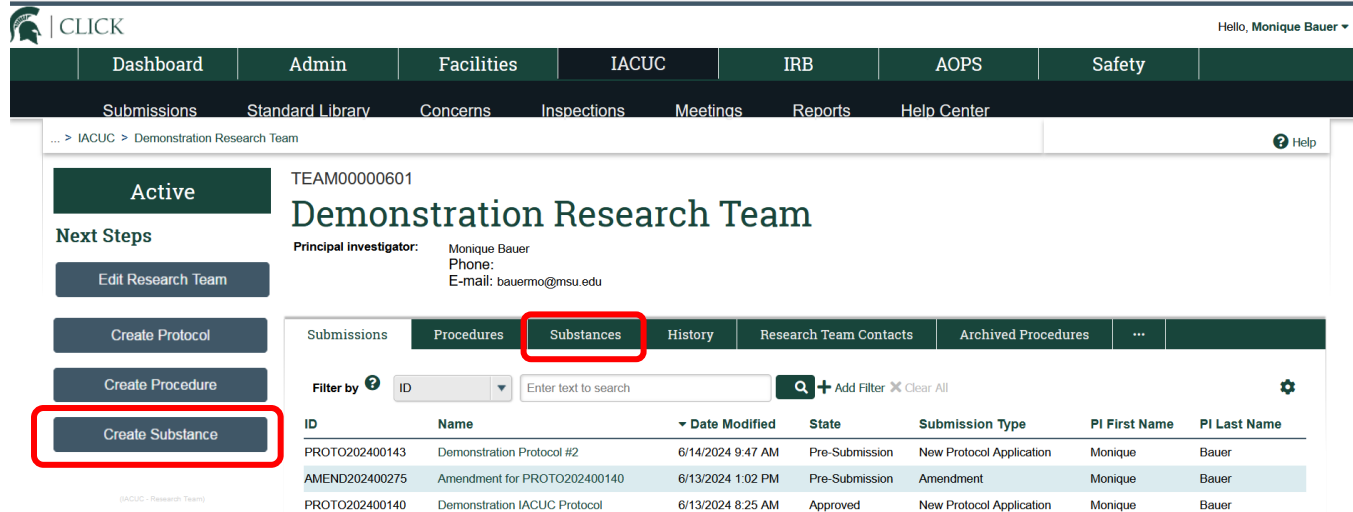
## Click IACUC: Substances, Procedures, and Experiments

### 2. Substances

Substances are the smallest building block within the Click IACUC module and are incorporated into the Substance Administration procedure type.

To create substances, begin at your Research Team workspace. The Substance tab is located along the center of the page. This tab houses Standard Substances already approved by the IACUC. Standard Substances may be selected for your team’s research at any time. Once team substances have been created, these will be available exclusively to your research team.

To create your own substances, select the button along the left side, **Create Substance**.



The screenshot shows the Click IACUC interface for the 'Demonstration Research Team'. The 'Substances' tab is selected and highlighted with a red box. On the left sidebar, the 'Create Substance' button is also highlighted with a red box. The main content area displays a table of substances with the following data:

ID	Name	Date Modified	State	Submission Type	PI First Name	PI Last Name
PROTO202400143	Demonstration Protocol #2	6/14/2024 9:47 AM	Pre-Submission	New Protocol Application	Monique	Bauer
AMEND202400275	Amendment for PROTO202400140	6/13/2024 1:02 PM	Pre-Submission	Amendment	Monique	Bauer
PROTO202400140	Demonstration IACUC Protocol	6/13/2024 8:25 AM	Approved	New Protocol Application	Monique	Bauer

After selecting the **Create Substance** button, a page will open where substance details are required:

- First, name the substance in Question 1;
- Categorize based on the substance types listed in Question 2, noting that more than one selection can be made; and
- Indicate if the substances is hazardous in Question 3. If the substance is hazardous, select the hazardous classifications that appear, noting that more than one selection can be made.
- If there are any supporting documents or safety documentation, please attach under Question 4 by selecting the **Add** button. Once the page is complete, select the **Save** and **Return to Workspace** buttons.

This substance is now a team substance available to your research team and ready for incorporation into a procedure.



## Click IACUC: Substances, Procedures, and Experiments

CLICK | Hello, Monique Bauer

### Creating New: Substance

Substance Information

1. \* Name:

2. \* Substance types: (select all that apply; contact Environmental Health and Safety (EHS) Team with questions regarding the classification of substances at 517-355-0153 or ehs@msu.edu)

- Analgesic
- Anesthetic
- Antibiotic
- Biological Agent
- Cell Line
- Chemical Agent
- Controlled Substance
- Human Derived Material
- Radioactive Agent
- Other

3. \* Is this a hazardous agent: (Contact Environmental Health and Safety (EHS) Team with questions regarding the classification of substances at 517-355-0153 or ehs@msu.edu)

Yes  No [Clear](#)

4. Supporting documents:  
Instructions: Attachment of Safety Data Sheet (SDS) may expedite review process.

[+ Add](#)

Document Name	Date Modified
There are no items to display	

[Exit](#) [Save](#) [Return to Workspace](#)

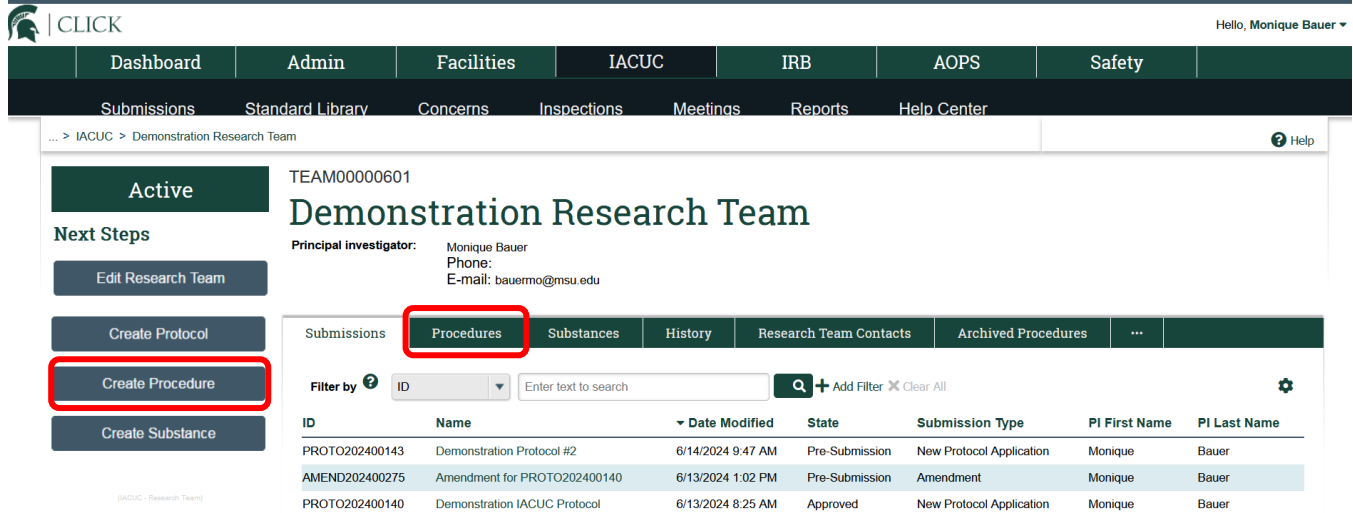
### 3. Procedures.

Procedures are defined by procedure type and species. There are different procedure types available to describe which type of research task is being conducted.

To create procedures, begin at your Research Team workspace. The Procedure tab is located along the center of the page. This tab houses Standard Procedures already approved by the IACUC. Standard Procedures may be selected for your team's research at any time. Once team procedures have been created, these will be available exclusively to your research team.

To create team procedures, select the button along the left side, **Create Procedure**.

## Click IACUC: Substances, Procedures, and Experiments



... > IACUC > Demonstration Research Team

Active

TEAM00000601

### Demonstration Research Team

Principal investigator: Monique Bauer  
Phone:  
E-mail: bauermo@msu.edu

Submissions | **Procedures** | Substances | History | Research Team Contacts | Archived Procedures | ...

Filter by ID  Enter text to search  + Add Filter  Clear All

ID	Name	Date Modified	State	Submission Type	PI First Name	PI Last Name
PROTO202400143	Demonstration Protocol #2	6/14/2024 9:47 AM	Pre-Submission	New Protocol Application	Monique	Bauer
AMEND202400275	Amendment for PROTO202400140	6/13/2024 1:02 PM	Pre-Submission	Amendment	Monique	Bauer
PROTO202400140	Demonstration IACUC Protocol	6/13/2024 8:25 AM	Approved	New Protocol Application	Monique	Bauer

After selecting the **Create Procedure** button on the Research Team workspace, the first procedure page opens; the following information is required:

- First, name the procedure in Question 1; it is recommended to come up with a naming convention for your team procedures to ensure they are easily organized and located in searches.
- Select the procedure type based on the task to accomplish in Question 2; selection of the different procedure types define which questions are asked on the second page of the procedure type. There are 19 procedure types that cover different research tasks. If there is question regarding which procedure type to use, please contact the IACUC office.
- Choose the species in Question 3.
- Once the page is complete, select the **Continue** button.



## Click IACUC: Substances, Procedures, and Experiments

CLICK

Procedure Identification

### Creating New: Procedure

#### Procedure Identification

1. \* Name of the procedure or surgery:

2. \* Select procedure type: ⓘ

- Antibody Production
- Behavioral
- Euthanasia
- Food or Fluid Restriction
- Food or Fluid Restriction Unrelated to Surgery
- Genotyping/Identification
- Imaging
- Irradiation
- Non-Survival Surgery
- Other Non-Surgical Procedures
- Physical Restraint
- Prolonged Physical Restraint
- Sample Collection (Non-Surgical)
- Special Diet
- Substance Administration
- Survival Surgery
- Tissue/Blood Collection
- Trapping and Capture
- Tumor Model

[Clear](#)

3. \* Species:

✕ Exit

🔒 Save

Continue →

The procedure type selected in Question 2 will dictate which questions appear on the second procedure page. Required questions (\*) must be answered on the second page and then the **Continue** button is selected.

If there are any supporting documents or other documentation, please attach under Question 1 by selecting the **Add** button. Select the **Save** button to complete the procedure.



## Click IACUC: Substances, Procedures, and Experiments

Procedure Identification

Special Diet

**Procedure Documents**

### Procedure Documents

1. Supporting documents: ?

←

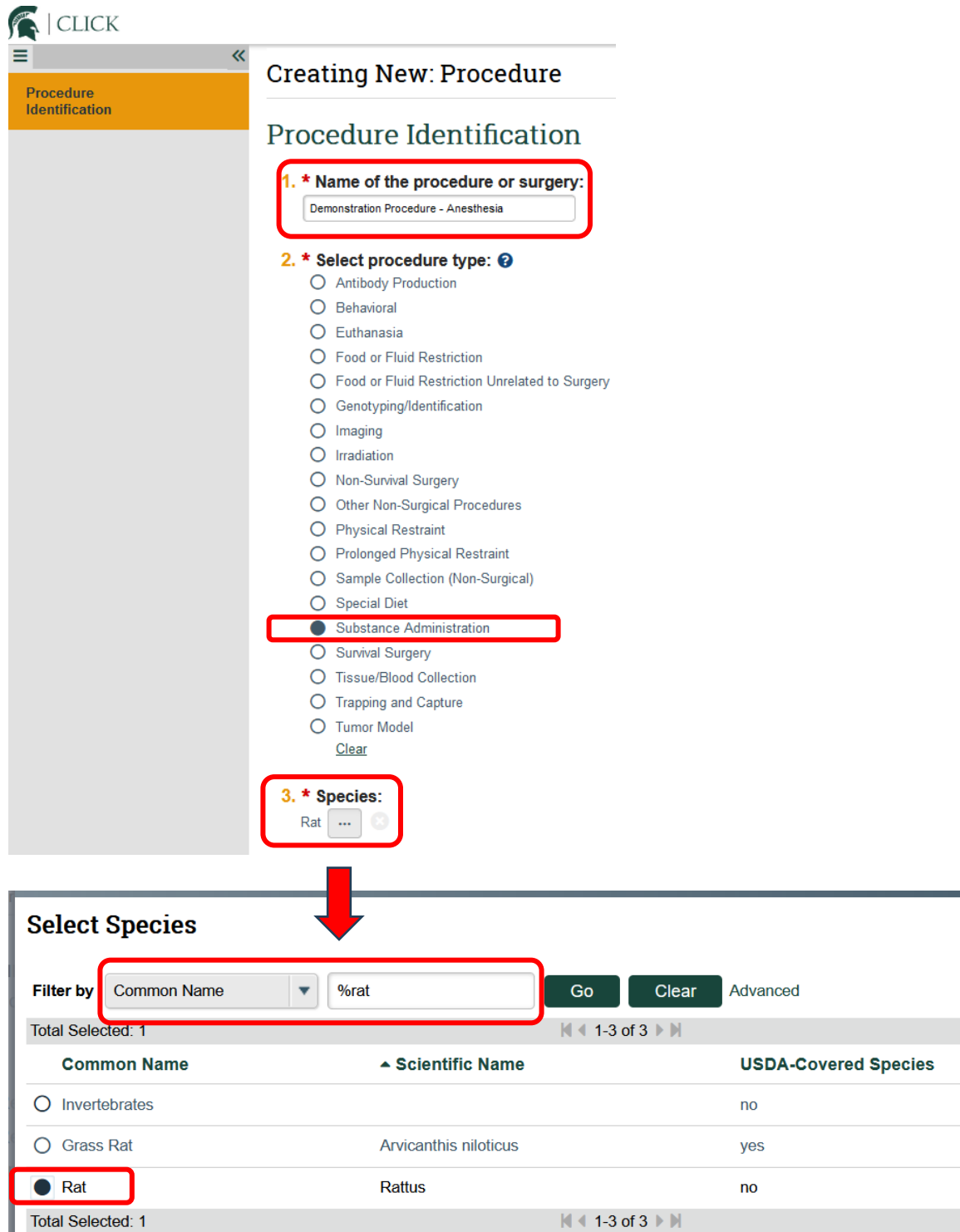
Document Name	Date Modified
There are no items to display	

The procedure is now a team procedure available to your research team and ready for incorporation into an experiment.

Prior to beginning a protocol, it is recommended to review the standard library for already created procedures and create any team specific procedures. In addition, it is recommended, at a minimum, to identify a standard procedure or to develop a team procedure for Euthanasia and Substance Administration, Anesthesia for each species used on the protocol.

## Click IACUC: Substances, Procedures, and Experiments

As an example, a Substance Administration procedure type for rats is demonstrated below.



**Creating New: Procedure**

**Procedure Identification**

1. \* Name of the procedure or surgery:

2. \* Select procedure type: ⓘ

- Antibody Production
- Behavioral
- Euthanasia
- Food or Fluid Restriction
- Food or Fluid Restriction Unrelated to Surgery
- Genotyping/Identification
- Imaging
- Irradiation
- Non-Survival Surgery
- Other Non-Surgical Procedures
- Physical Restraint
- Prolonged Physical Restraint
- Sample Collection (Non-Surgical)
- Special Diet
- Substance Administration
- Survival Surgery
- Tissue/Blood Collection
- Trapping and Capture
- Tumor Model

[Clear](#)

3. \* Species:

---

**Select Species**

Filter by:     Advanced

Total Selected: 1 1-3 of 3

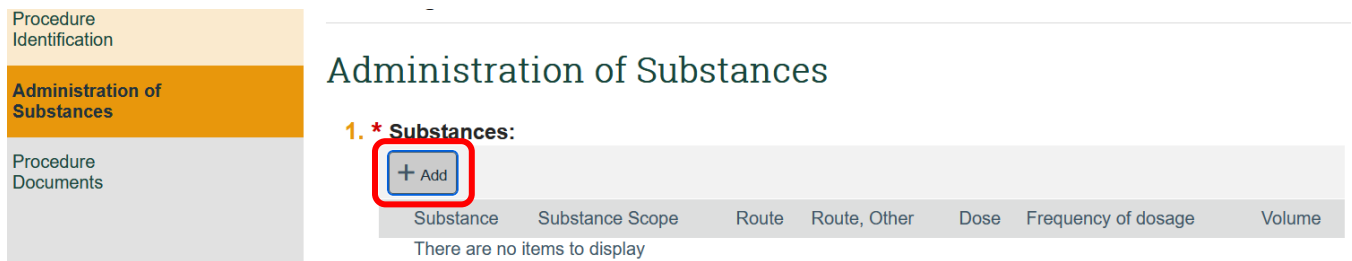
Common Name	Scientific Name	USDA-Covered Species
<input type="radio"/> Invertebrates		no
<input type="radio"/> Grass Rat	Arvicantis niloticus	yes
<input checked="" type="radio"/> Rat	Rattus	no

Total Selected: 1 1-3 of 3

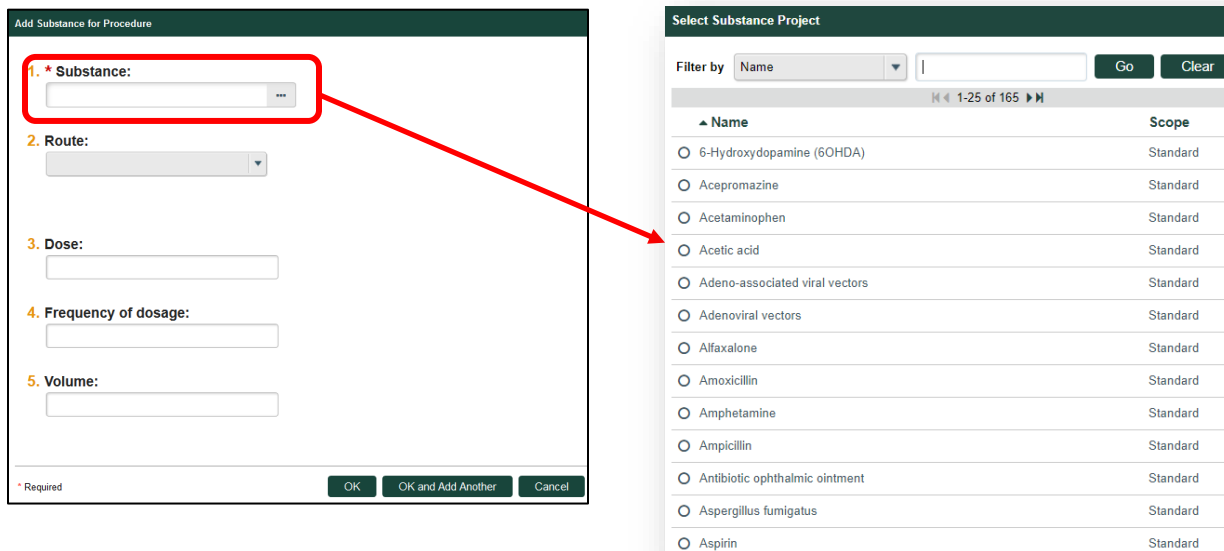
## Click IACUC: Substances, Procedures, and Experiments

After selecting the **Continue** button on the first page, the second page of the procedure requests information regarding the details of the substance route, dose, frequency, and volume.

- For Question 1, select the **Add** button to add a substance.



- A slide-in window appears and a standard or team substance may be selected. Then additional details provided within the slide-in window questions. More than one substance may be added depending on the type of research being conducted.



Name	Scope
<input type="radio"/> 6-Hydroxydopamine (6OHDA)	Standard
<input type="radio"/> Acepromazine	Standard
<input type="radio"/> Acetaminophen	Standard
<input type="radio"/> Acetic acid	Standard
<input type="radio"/> Adeno-associated viral vectors	Standard
<input type="radio"/> Adenoviral vectors	Standard
<input type="radio"/> Alfaxalone	Standard
<input type="radio"/> Amoxicillin	Standard
<input type="radio"/> Amphetamine	Standard
<input type="radio"/> Ampicillin	Standard
<input type="radio"/> Antibiotic ophthalmic ointment	Standard
<input type="radio"/> Aspergillus fumigatus	Standard
<input type="radio"/> Aspirin	Standard

- For Question 2, describe the process for preparing and administering the substance.

2. \* Describe step-by-step the procedure for preparing and administering the substance: ?



## Click IACUC: Substances, Procedures, and Experiments

- Question 3 requires additional justification if the substances are not of pharmaceutical grade.

3. \* Are all substances being administered in this procedure of pharmaceutical grade?

Yes  No [Clear](#)

- Question 4 defines whether the procedure causes any more than momentary pain and distress. Once all required fields have been entered, select the **Continue** button.

4. \* Will administering this procedure cause any more than momentary pain and distress?

Yes  No [Clear](#)

After all questions are answered on this page, selection of the **Continue** button brings you to the supporting documents page where attachments can be added. Select the **Save** and **Return to Workspace** buttons to complete the procedure. This procedure is now a team procedure.

Demonstration Procedure - Anesthesia      Actions ▼      6/14/2024 12:53 PM      Active 1      Rat      Substance Administration      **Team**

### 4. Experiments.

Experiments are a critical element of the protocol, are species-driven, and generally consist of one or more procedures. To build an experiment, begin at your Research Team workspace and select a protocol from the **Submissions** tab. **Note:** If a protocol has not been created for the research team yet, select the Create Protocol button. Please see additional support materials for assistance in creating a new protocol: <https://orrs.msu.edu/click/index.html>.

Submissions    Standard Library    Concerns    Inspections    Meetings    Reports    Training    ...

Root > IACUC > Demonstration Research Team      [Admin View](#)    [Help](#)

**Active**      TEAM00000601

## Demonstration Research Team

Principal investigator: Monique Bauer  
Phone:  
E-mail: bauermo@msu.edu

Create Protocol    **Submissions**    Procedures    Substances    History    Research Team Contacts    Archived Procedures    ...

Create Procedure

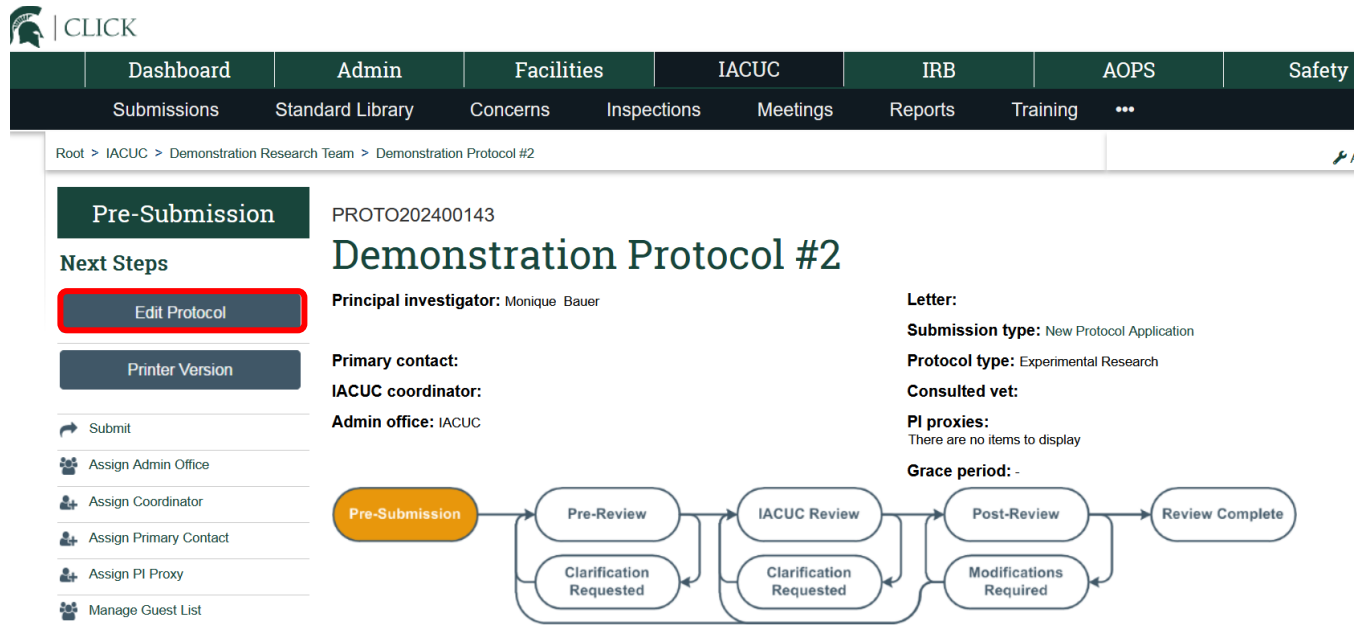
Create Substance

Filter by ⓘ    ID    Enter text to search    🔍    + Add Filter    ✕ Clear All    ⚙️

ID	Name	Date Modified	State	Submission Type	PI First Name	PI Last Name
PROTO202400143	Demonstration Protocol #2	6/14/2024 9:47 AM	Pre-Submission	New Protocol Application	Monique	Bauer

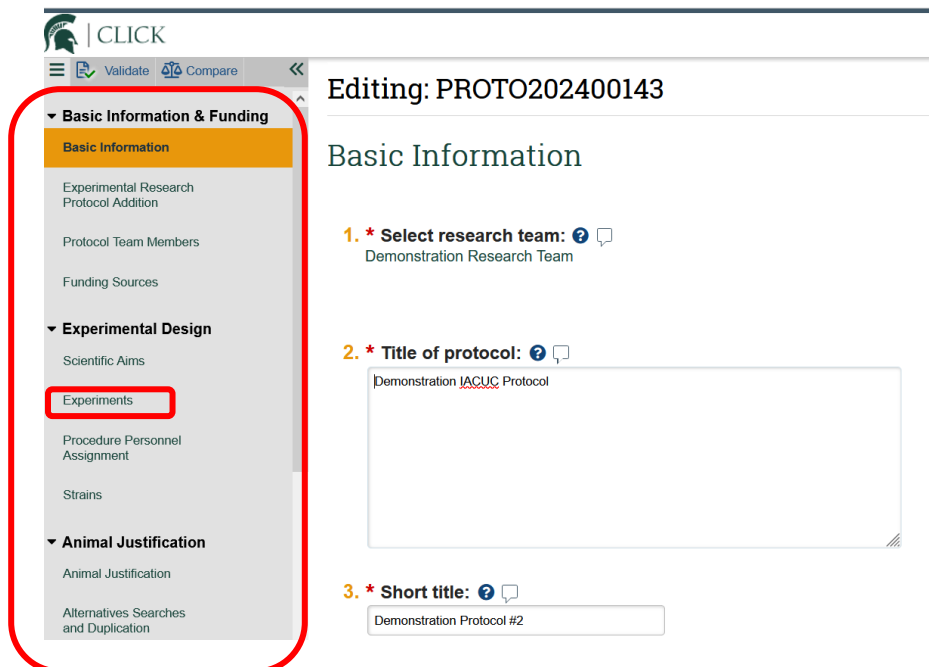
## Click IACUC: Substances, Procedures, and Experiments

Select **Edit Protocol** from the protocol workspace.



The screenshot shows the 'Pre-Submission' page for protocol PROTO202400143. The left sidebar contains a 'Next Steps' menu with 'Edit Protocol' highlighted in a red box. The main content area displays protocol details: Principal investigator (Monique Bauer), Primary contact, IACUC coordinator, and Admin office (IACUC). It also shows submission type (New Protocol Application), protocol type (Experimental Research), and a flowchart of the review process: Pre-Submission → Pre-Review (with Clarification Requested) → IACUC Review (with Clarification Requested) → Post-Review (with Modifications Required) → Review Complete.

The first page of the protocol is the Basic Information page. The **File Menu** along the left side of the page displays a list of all the protocol pages. This menu allows the user to easily navigate throughout the protocol pages. Within the list, select **Experiments** to go to this protocol page.



The screenshot shows the 'Editing: PROTO202400143' page. The left sidebar is expanded to show the 'Basic Information & Funding' section, with 'Experiments' highlighted in a red box. The main content area displays the 'Basic Information' form with three required fields: 1. Select research team (Demonstration Research Team), 2. Title of protocol (Demonstration IACUC Protocol), and 3. Short title (Demonstration Protocol #2).



## Click IACUC: Substances, Procedures, and Experiments

On the Experiments page, select the **Add** button located under Question 1. This displays a slide-in window where the details of each experiment are provided.

### Experiments

**i Important!** Make sure all procedures required for your protocol exist in the IACUC system before you add experiments.

If the procedure is not yet created: [Create Procedure](#)

**1. \* Define the experiments to be used in this protocol:**

+ Add				
Name	Species	Is USDA	Total Pain	Category Procedures

Next, answer all required questions on the experiment slide-in window:

- For Question 1, it is recommended to add a numbering scheme to the experiments to better arrange their display in the order you prefer; this organization will also assist the IACUC reviewers.
- Question 2, enter an experiment name.
- Question 3 defines which species the experiment encompasses. If your research is wildlife, please search for 'wildlife' and select the appropriate option. Select the ellipsis button to choose a species.

### Add Experiment

**1. Display order:**

**2. \* Experiment name:**

**3. \* Species: ?**



## Click IACUC: Substances, Procedures, and Experiments

- Question 4 provides the detail of the research or teaching activity and the sequence and frequency of procedures involved.

**4. \* Explain the design of the research or teaching activity and sequence and frequency of procedures.**

Your target audience is an external inspector and/or faculty member from a discipline that may be unrelated to yours.

**5. Define humane endpoints for this experiment: ?**

- Question 6 defines which procedures will be part of the experimental activity. Select the ellipsis button and choose one or multiple procedures. Note the selection of a substance administration procedure for a test substance completes the connection of the system’s building blocks – the substance was created, pulled into a procedure, and then the procedure was selected for an experiment within a protocol.

**6. Select procedures: ?**

...

Name	Type	Version	State	Scope
There are no items to display				



### Select One or More Procedure Projects

Filter by Name | Go Clear Advanced

Deselect All

◀ 1-25 of 26 ▶

Name	Type	Version	Species	Scope
<input type="checkbox"/> Application of Depilatory Cream for Hair Removal	Substance Administration	2	Rat	Standard
<input type="checkbox"/> Application of Surgical Tissue Adhesive	Substance Administration	1	Rat	Standard
<input type="checkbox"/> Blood, Tail Prick	Sample Collection (Non-Surgical)	2	Rat	Standard
<input type="checkbox"/> Blood, Tail Vein	Sample Collection (Non-Surgical)	1	Rat	Standard
<input type="checkbox"/> Bupivacaine (Analgesia)	Substance Administration	1	Rat	Standard



## Click IACUC: Substances, Procedures, and Experiments

- The total numerical value of animals in Question 7 and Question 8 must match. Please note if a non-USDA species is used, select category C for Question 8.
- Question 9 asks for scientific justification of the number of animals required for the experimental activity.

7. \* **Total** number of animals used in this experiment:

100

8. Number of animals by category (if animal is non-USDA, list all animals in category C):

B: 0

C: 100

D: 0

E: 0

9. \* Provide scientific justification for how you determined the number of animals needed for this procedure/experiment/activity.

For guidance see: Scientific Justification for the Number of Animals to be used in Research, Teaching or Testing (RD001).

- Question 10 requests information on whether there are any potential adverse consequences that will result from this experiment.
- Question 11 captures whether unrelieved pain and distress occurs within this activity. If Yes, additional justification is required.

10. \* Are there any potential adverse consequences that will result from this experiment?

Yes  No [Clear](#)

11. \* Will this experiment involve any unrelieved pain and distress?

Yes  No [Clear](#)

- For Question 12, select the location where animals will be used – this is where the experimental procedures will occur. If you are conducting wildlife field studies, search for ‘wildlife’ in the building lookup and the room number will be listed as ‘not applicable’ and select this option.



## Click IACUC: Substances, Procedures, and Experiments

12. \* Identify where live animals will be used outside of animal housing facilities.  
If animals will be used within an existing housing facility, farm or CAR facility, please select Not Applicable.

Building	Room
There are no items to display	



## Click IACUC: Substances, Procedures, and Experiments

- If there are any husbandry exceptions for this experiment, select Yes for Question 13 and select **Add** for Question 14. Examples of husbandry exceptions include anything that differs from a conventional housing environment such as temperature or humidity, air quality or ventilation, or noise.

### 13. \* Are there any husbandry exceptions for this experiment?

*Exceptions are defined as anything that differs from a conventional housing environment.*

Yes  No [Clear](#)

### 14. If yes, identify husbandry exceptions:

Type	Description	Justification	Num of Animals
There are no items to display			



#### Add Husbandry Exception

##### 1. \* Exception Type:

- Temperature / Humidity
- Sanitation / Waste Disposal
- Air Quality / Ventilation
- Space Requirements
- Pest Control
- Water
- Feed
- Noise
- Lighting
- Bedding
- Acclimation
- Other



## Click IACUC: Substances, Procedures, and Experiments

- If there are any supporting documents, please attach under Question 15 by selecting the **Add** button.
- After all questions have been answered, select the **Ok** button at the bottom of the page.

### 15. Supporting documents: ?

**+ Add**

Document Name	Date Modified
There are no items to display	

\* Required

**OK** **OK and Add Another** **Cancel**

Once back on the Experiment page, to add another experiment, select the **Add** button. Another option is to **Copy** the experiment if it is similar to the previously created experiment and then update accordingly.

### 1. \* Define the experiments to be used in this protocol: □

**+ Add**

Name	Species	Is USDA	Total	Pain Category	Procedures	
Mouse Experiment	Mouse	no	5	B: 0, C: 5, D: 0, E: 0	<ul style="list-style-type: none"> <li>• ✓ Blood, Tail Prick (Standard - Sample Collection (Non-Surgical))</li> <li>• ✓ Isoflurane (Anesthesia) (Standard - Substance Administration)</li> </ul>	<b>Copy</b> ⌵
Rat Experiment	Rat	no	10	B: 0, C: 10, D: 0, E: 0	<ul style="list-style-type: none"> <li>• ✓ CO2 (Standard - Euthanasia)</li> </ul>	<b>Copy</b> ⌵

The experiments created define the research activities completed by a researcher in detail and are constructed using the substance and procedure building blocks.

For further support within the Click IACUC module, please contact the IACUC Administrative Office ([iacuc@msu.edu](mailto:iacuc@msu.edu), 517-432-8103) or the Click Help Desk ([clickhelpdesk@msu.edu](mailto:clickhelpdesk@msu.edu), 517-355-2000).