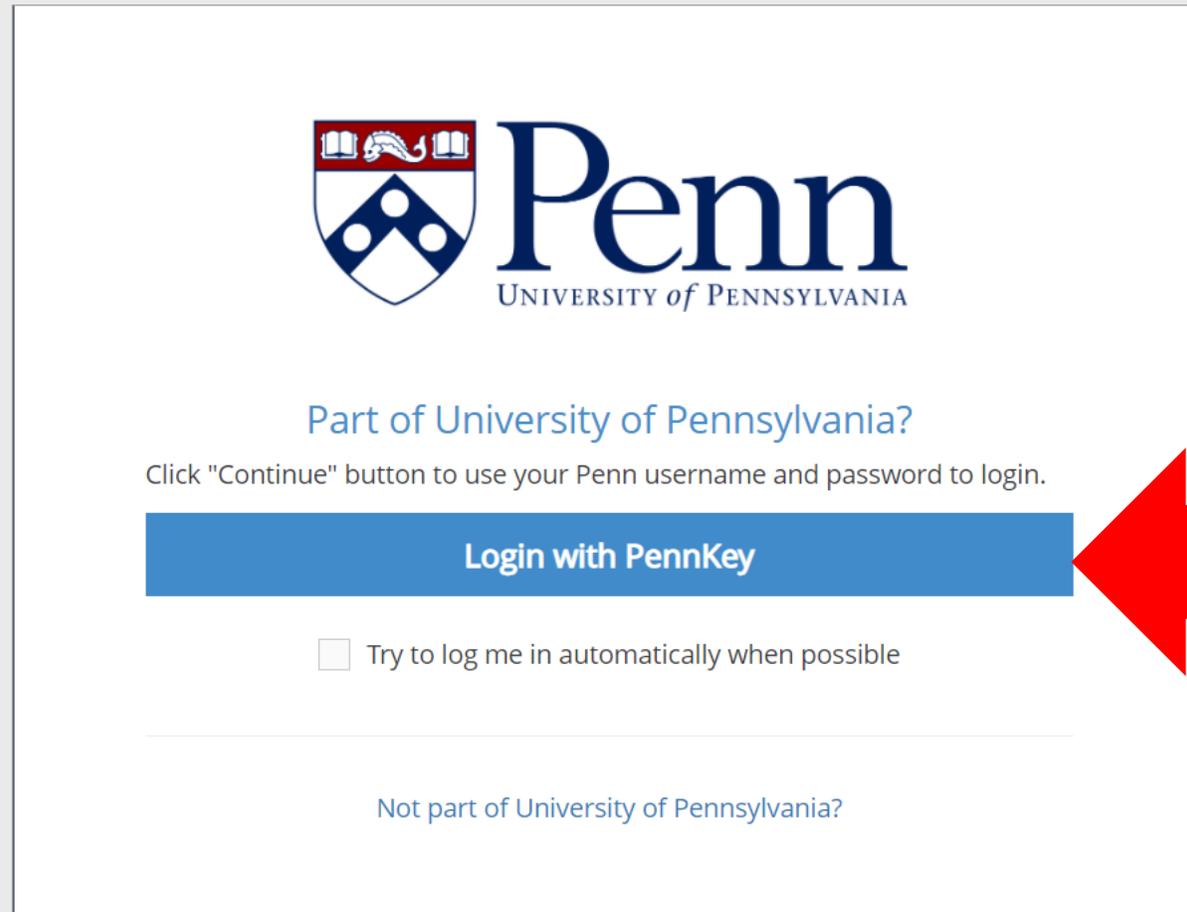


How to Create an IBC Registration using PIERS

- This tutorial is for Researchers.
- In this tutorial, you will learn:
 - How to login to the Online IBC System ([Slide 2](#))
 - How to initiate a new IBC registration ([Slides 3 – 7](#))
 - How to find your IBC number ([Slide 8](#))
 - How to delegate editing privileges to a lab member ([Slides 14 – 17](#))
 - How to fill out the IBC registration ([Slides 4 – 37](#))
 - How to submit the IBC registration for pre-review ([Slides 35 – 37](#))
 - How to make modifications after pre-review ([Slides 38 – 42](#))
 - How to certify the registration ([Slides 43 – 44](#))

Navigate to the online IBC system: <https://apps.research.upenn.edu/login>. To log in, click on the “Login with PennKey” button and enter your PennKey and password. Two-factor authentication is required.



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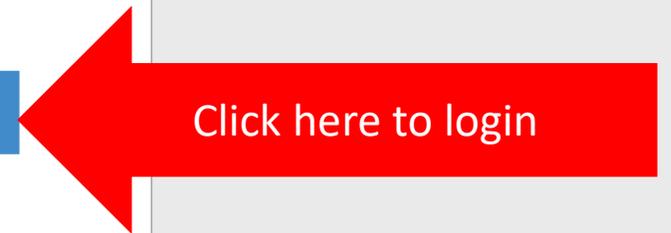
Part of University of Pennsylvania?

Click "Continue" button to use your Penn username and password to login.

[Login with PennKey](#)

Try to log me in automatically when possible

Not part of University of Pennsylvania?



To initiate a new registration, hover over the “IBC” button (1). Click “IBC New Registration” from the drop-down menu (2).

The screenshot displays the Penn IBC interface. At the top left is the Penn University of Pennsylvania logo. The top right shows a navigation menu with a hamburger icon, two notification icons with '0', and a user profile 'Welcome, DemoIBC Researcher5'. Below the logo is a 'Profile & Settings' menu with an 'IBC' button highlighted by a red arrow labeled '1. Hover over the “IBC” button'. A dropdown menu is open from the 'IBC' button, containing 'IBC Tasks', 'Search IBC Registrations', 'IBC New Registration' (highlighted by a red arrow labeled '2. Click “IBC New Registration”'), and 'IBC Meeting Dashboard'. Below the dropdown is a 'Filter Search by task meta data' section with input fields for 'Type' (set to 'Filter by Task Type'), 'Keyword', 'Completed Status' (set to 'Incomplete'), and 'PI' (set to 'Select PI users'). At the bottom of the filter section are 'Filter Tasks' and 'Reset Filters' buttons. The bottom of the page shows a 'My Assigned Tasks' section with tabs for 'Following' and 'Away Schedule', and a table header with columns: 'Type', 'Action', 'Message', 'Due Date', 'Task Created', and a page number '3'.

On the “Initial IBC Registration” page, provide a unique and detailed title. Fill in the PI box with the PI’s name. Click the “This registration will involve” box to view the drop-down menu.

Initial IBC Registration

Project Information

Title*

Cancer cell migration murine model using cells modified with lentiviral vectors

PI*

Researcher5, DemoIBC

This registration will involve*

Select one

IBC Biosafety Officer ?

Start typing...

Click here to view the drop-down menu

CONTINUE

From the drop-down menu, select what the registration will involve. Choose "Creating Transgenic Animals" when registering the creation of transgenic mice. Choose "Crossing and/or Using Transgenic Animals" when registering crossing mice at ABSL-2 or higher containment OR when creating, crossing, or using transgenic flies, worms, or ants. Choose "Generating and/or Using rsNA Materials" when registering viral vectors, CRISPR/Cas9, or mRNA-LNP. Choose "Generating and/or Using Transgenic Plants" when registering the creation, crossing, or use of transgenic plants.

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Profile & Settings IBC

Welcome, DemoIBC Researcher5

Initial IBC Registration

Project Information

| | |
|---------------------------------|--|
| Title* | <input type="text"/> |
| PI* | <ul style="list-style-type: none">Creating Transgenic AnimalsCrossing and/or Using Transgenic AnimalsGenerating and/or Using rsNA MaterialsGenerating and/or Using Transgenic Plants |
| This registration will involve* | <input type="text" value="Select one"/> |
| IBC Biosafety Officer ? | <input type="text" value="Start typing..."/> |

Select what the registration will involve from the menu

CONTINUE

Because “Generating and/or Using rsNA materials” was chosen, the “rsNA” box has appeared. Click on the “rsNA” box to choose what material will be used. Scroll down to view the “Other” material which includes Naked DNA/RNA, Plasmid, Modified Microorganism, Modified Cells, and Other. If you choose “Other” below the “Other” material option, you will be asked to describe the material in an additional box.

Project Information

Title*

- Viral Vector
- AAV
- Adenovirus
- Lentivirus**
- Retrovirus
- Other

PI*

This registration will involve*

rsNA*

Select one

IBC Biosafety Officer ?

Start typing...

CONTINUE

Enter the name of the Biosafety Officer with whom you are working (1). If you are not yet working with a Biosafety Officer, you may leave it blank. Click the “Continue” button to continue filling out the registration form (2).

 Penn UNIVERSITY of PENNSYLVANIA

Profile & Settings IBC

Welcome, DemoIBC Researcher5

Project Information

Title*

PI*

This registration will involve*

 rsNA*

IBC Biosafety Officer 

1. Enter name of a Biosafety Officer

CONTINUE **2. Click here to continue**

7

The new registration has been created. Notice the “Panel shortcuts” on the left. This panel will help you navigate the form. Also notice that a new IBC number has been generated.

The screenshot shows the Penn IBC registration interface. At the top left is the Penn University of Pennsylvania logo. The top right shows a user profile for 'DemoIBC Researcher5' with notification and menu icons. The left sidebar contains 'Panel shortcuts' for various form sections: Project Information, Personnel, NIH Guidelines, Material, Genes, Genome Editing, Target Recipients, Biosafety Containment, and Workflow & History. The main content area shows a breadcrumb trail 'Home > IBC > Edit IBC Registration' and a 'Save record as PDF' button. Below this is the 'Project Information' section with a table of registration details:

| Project Information | |
|------------------------------|---|
| Registration Number | 21-169 |
| Expiration Date (mm/dd/yyyy) | |
| Title* | Cancer cell migration murine model using cells modified with lentiviral vectors |

At the bottom of the form are three buttons: 'SAVE', 'SUBMIT FOR APPROVAL', and 'Check Validations'. A page number '8' is visible in the bottom right corner.

Navigate the form here

Your new IBC number

Continue filling out the “Project Information” section by providing a Detailed Project Description.

The screenshot shows the Penn IBC web interface. At the top left is the Penn University of Pennsylvania logo. The top right shows a user profile for 'DemoIBC Researcher5' with a welcome message and a dropdown arrow. Below the header, there are navigation tabs for 'Profile & Settings' and 'IBC'. The main content area is titled '21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...'. On the left, there is a 'Panel shortcuts' sidebar with options like 'Project Information', 'Personnel', 'NIH Guidelines', 'Material', 'Genes', 'Genome Editing', 'Target Recipients', 'Biosafety Containment', and 'Workflow & History'. The 'Project Information' section is active, showing a 'Detailed Project Description' field. A red arrow points to this field with the text 'Provide a detailed project description'. The field contains a rich text editor with a toolbar and the following text: 'A good project description includes the following:' followed by a bulleted list of requirements for a project description. At the bottom of the page, there are three buttons: 'SAVE', 'SUBMIT FOR APPROVAL', and 'Check Validations'. The page number '9' is visible in the bottom right corner.

Profile & Settings | IBC

Panel shortcuts
collapse all | expand all

Project Information
Personnel
NIH Guidelines
Material
Genes
Genome Editing
Target Recipients
Biosafety Containment
Workflow & History

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

Detailed Project Description

A good project description includes the following:

- A brief project background and justification of the use of rsNA
- The type of vector or material being used
- If modifying cells, the type and species origin of the cells
- The genes of interest and a brief explanation of why they are being studied
- The target recipient of the rsNA - this may be cells or animals
- If administering rsNA material to an animal, a brief description of administration
- Where the material was purchased or acquired
- If using worms, flies, ants, or any other animals outside of ULAR, a brief explanation of how the animals are inactivated/euthanized and disposed as hazardous waste
- Good grammar and punctuation

SAVE | SUBMIT FOR APPROVAL | Check Validations

9

Below the project description box, click “Add Lab Location” to add the location of your lab where this work will occur.

The screenshot displays the Penn IBC registration interface. At the top left is the University of Pennsylvania logo. The top right shows a user profile for 'DemoIBC Researcher5' with notification and menu icons. The main content area is titled '21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...'. Below the title is a text area containing a list of requirements for a good project description:

- A brief project background and justification of the use of rsNA
- The type of vector or material being used
- If modifying cells, the type and species origin of the cells
- The genes of interest and a brief explanation of why they are being studied
- The target recipient of the rsNA - this may be cells or animals
- If administering rsNA material to an animal, a brief description of administration
- Where the material was purchased or acquired
- If using worms, flies, ants, or any other animals outside of ULAR, a brief explanation of how the animals are inactivated/euthanized and disposed as hazardous waste
- Good grammar and punctuation

Below the text area is a blue button labeled '+ Add Lab Location'. A large red arrow points from the text 'Click here to add lab location' to this button. At the bottom of the page are three buttons: 'SAVE', 'SUBMIT FOR APPROVAL', and 'Check Validations'.

The “Lab Location” box will pop up. Start typing the lab location in the “Building” box (1) and choose the correct building from the drop-down menu (2).

Lab Location

Building*

Select one

Clj

Other - Not Listed

Clinical Research Building

1. Start typing building name here

2. Choose the correct building from menu

+ Save

+ Add Lab Location

Personnel

SAVE SUBMIT FOR APPROVAL Check Validations

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Enter the room number in the “Room #” box (1). Click the “Save” button (2).

The image shows a 'Lab Location' form with the following fields:

- Building*: Clinical Research Building
- Room #*: 534

At the bottom of the form are two buttons: 'Cancel' and 'Save'.

Red arrows point to the 'Room #' field and the 'Save' button, with the following text:

- 1. Enter room number here
- 2. Click Save

The background shows a sidebar with navigation options: Profile & Settings, Panel short, collapse all | expand, Project Information, Personnel, NIH Guidelines, Material, Genes, Genome Editing, Target Recipients, Biosafety Containment, Workflow & History, collapse all | expand all. At the bottom, there are buttons for 'SAVE', 'SUBMIT FOR APPROVAL', and 'Check Validations', along with a page number '12'.

The lab location has been added. If necessary, you may add additional lab locations.

 Penn UNIVERSITY OF PENNSYLVANIA

Profile & Settings | IBC

Welcome, DemoIBC Researcher5

Panel shortcuts
collapse all | expand all

- Project Information
- Personnel
- NIH Guidelines
- Material
- Genes
- Genome Editing
- Target Recipients
- Biosafety Containment
- Workflow & History

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

- If administering rsNA material to an animal, a brief description of administration
- Where the material was purchased or acquired
- If using worms, flies, ants, or any other animals outside of ULAR, a brief explanation of how the animals are inactivated/euthanized and disposed as hazardous waste
- Good grammar and punctuation

+ Add Lab Location

collapse rows - | expand rows +

| Building | Room# | Action |
|----------------------------|-------|---|
| Clinical Research Building | 534 |   |

Lab location has been added

SAVE **SUBMIT FOR APPROVAL** Check Validations

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Scroll down or click on the “Personnel” link in the panel shortcuts to navigate to the “Personnel” section. The PI is automatically listed as personnel. To add additional personnel, click on the “Add Project Personnel” button.

The screenshot shows the Penn IBC web interface. At the top left is the Penn University of Pennsylvania logo. The top right shows a user profile for 'DemoIBC Researcher5'. The left sidebar contains 'Panel shortcuts' with 'Personnel' circled in red. The main content area shows a project titled '21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...'. Below this is a 'Personnel' section with a blue button labeled '+ Add Project Personnel' and a red arrow pointing to it with the text 'Click here to add personnel'. Below the button is a table with columns: Name, Contact details, Training Status, and Action. The table contains one row for 'Researcher5, DemoIBC - PI' with a contact icon, training status 'Penn Profiler Training Assessment - UNIV - Incomplete' and 'Recombinant or Synthetic Nucleic Acid Guidelines-EHRS - Incomplete', and an edit icon in the Action column. Below the Personnel section is an 'NIH Guidelines' section. At the bottom, there are buttons for 'SAVE', 'SUBMIT FOR APPROVAL', and 'Check Validations', along with a page number '14'.

Profile & Settings | IBC

Panel shortcuts
collapse all | expand all

- Project Information
- Personnel**
- NIH Guidelines
- Material
- Genes
- Genome Editing
- Target Recipients
- Biosafety Containment
- Workflow & History

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

Personnel

+ Add Project Personnel

Click here to add personnel

collapse rows - | expand rows +

| Name | Contact details | Training Status | Action |
|---------------------------|-----------------|---|--------|
| Researcher5, DemoIBC - PI | | Penn Profiler Training Assessment - UNIV - Incomplete Recombinant or Synthetic Nucleic Acid Guidelines-EHRS - Incomplete | |

NIH Guidelines

This section describes experiments covered by the NIH Guidelines. Check the appropriate registration category(s) for your experiment: (Note: No

SAVE SUBMIT FOR APPROVAL Check Validations

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The “Project Personnel” box will pop up. Add the personnel affiliation by clicking the appropriate circle (“University of Pennsylvania” for Penn people or “Other” for everyone outside of the university).

Project Personnel

Affiliation* University of Pennsylvania Other

Edit permission

Choose University Affiliation

Cancel Save

| Name | Contact details | Training Status | Action |
|---------------------------|-----------------|---|--------|
| Researcher5, DemoIBC - PI | | Penn Profiler Training Assessment - UNIV - Incomplete Recombinant or Synthetic Nucleic Acid Guidelines-EHRS - Incomplete | |

NIH Guidelines

This section describes experiments covered by the NIH Guidelines. Check the appropriate registration category(s) for your experiment: (Note: No

SAVE SUBMIT FOR APPROVAL Check Validations

If you choose “University of Pennsylvania”, the “Personnel name” box will appear. Start typing the name using the person’s PennKey/email address.

Project Personnel

Affiliation* University of Pennsylvania Other

Personnel name* **Enter PennKey here**

Edit permission

| Name | Contact details | Training Status | Action |
|---------------------------|-----------------|---|--------|
| Researcher5, DemoIBC - PI | | Penn Profiler Training Assessment - UNIV - Incomplete Recombinant or Synthetic Nucleic Acid Guidelines-EHRS - Incomplete | |

NIH Guidelines

This section describes experiments covered by the NIH Guidelines. Check the appropriate registration category(s) for your experiment: (Note: No

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Choose the appropriate name. Click the “Edit permission” box if you wish to give this person editing permission (1). Click the “Save” button to add the person to the personnel list (2).

Project Personnel

Affiliation* University of Pennsylvania Other

Personnel name*

Edit permission **1. Grant editing permission here**

2. Click Save

| Name | Contact details | Training Status | Action |
|---------------------------|-----------------|---|--------|
| Researcher5, DemoIBC - PI | | Penn Profiler Training Assessment - UNIV - Incomplete Recombinant or Synthetic Nucleic Acid Guidelines-EHRS - Incomplete | |

NIH Guidelines

This section describes experiments covered by the NIH Guidelines. Check the appropriate registration category(s) for your experiment: (Note: No

If the person is not affiliated with Penn, click “Other” (1). The “Project Personnel” box will expand. Fill out the required information (2) before clicking the “Save” button (3) at the end of the form to add the person.

The image shows a screenshot of a web form titled "Project Personnel" with a close button (X) in the top right corner. The form contains several input fields and a dropdown menu. Three red arrows with text annotations point to specific parts of the form:

- Arrow 1:** Points to the "Affiliation*" field, which has two radio button options: "University of Pennsylvania" and "Other". The "Other" option is selected. The annotation text is "1. Click here if person is not affiliated with Penn".
- Arrow 2:** Points to the "Email*", "First Name*", "Last Name*", "Department", "Phone", and "Country" fields. The "Country" dropdown is currently set to "United States". The annotation text is "2. Fill out required information".
- Arrow 3:** Points to the "Save" button at the bottom right of the form. The annotation text is "3. Click Save".

The form fields are:

- Affiliation* (Radio buttons: University of Pennsylvania, Other)
- Email*
- First Name*
- Last Name*
- Department
- Phone
- Country (Dropdown: United States)
- Address 1*
- Address 2
- Zip/Postal Code
- City

On the right side of the form, there is a vertical sidebar with a "Action" section containing icons for edit, delete, and save. At the bottom right, there is a "Save" button and a page number "18".

Required training (Recombinant or Synthetic Nucleic Acid Guidelines) is automatically checked for Penn affiliated personnel. All people handling the material should be listed as project personnel.

University of Pennsylvania logo and navigation bar with "Profile & Settings" and "IBC" tabs. User: "Welcome, DemoIBC Researcher5".

Panel shortcuts: Project Information, Personnel, NIH Guidelines, Material, Genes, Genome Editing, Target Recipients, Biosafety, Containment, Workflow & History.

Project: 21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

Personnel

[+ Add Project Personnel](#)

collapse rows - | expand rows +

| Name | Contact details | Training Status | Action |
|---------------------------|-----------------|--|--------|
| Researcher5, DemoIBC - PI | | Penn Profiler Training Assessment - UNIV - Incomplete Recombinant or Synthetic Nucleic Acid Guidelines-EHRS - Incomplete | |
| Sarah Bardsley | | N/A | |
| LITTAUER, ELIZABETH Q | | Penn Profiler Training Assessment - UNIV - Expired (08/30/2019) Recombinant or Synthetic Nucleic Acid Guidelines-EHRS - Complete (08/30/2019) | |

Status of required training (indicated by red arrow pointing to the training status column)

collapse all | expand all

SAVE | SUBMIT FOR APPROVAL | Check Validations

Scroll down or click on the “NIH Guidelines” link in the Panel shortcuts. Choose the appropriate registration category(s) by checking the box next to the appropriate category(s). For more information on this, please see the *Experiments Covered by the NIH Guidelines* starting on page 17 of the NIH Guidelines: https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.pdf

The screenshot shows the Penn IBC system interface. At the top left is the University of Pennsylvania logo. The top right shows a user profile for "DemoIBC Researcher5" with notification and menu icons. The main navigation bar includes "Profile & Settings" and "IBC". A left sidebar titled "Panel shortcuts" lists various categories, with "NIH Guidelines" circled in red. The main content area shows a breadcrumb trail for a new registration and a section titled "NIH Guidelines" with a light blue background. Below this is a text box explaining the purpose of the section. Further down, a section titled "III-A. Experiments that Require Institutional Biosafety Committee Approval, RAC Review, and NIH Director Approval Before Initiation." contains a list of checkboxes for registration categories, with the first two items visible.

Profile & Settings IBC

Panel shortcuts
collapse all | expand all

- Project Information
- Personnel
- NIH Guidelines**
- Material
- Genes
- Genome Editing
- Target Recipients
- Biosafety Containment
- Workflow & History

collapse all | expand all

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

NIH Guidelines

This section describes experiments covered by the NIH Guidelines. Check the appropriate registration category(s) for your experiment: (Note: No research may be initiated for categories A through D below until ALL required approvals are received.)

III-A. Experiments that Require Institutional Biosafety Committee Approval, RAC Review, and NIH Director Approval Before Initiation.

- 1. Major Actions (see Section IV-C-1-b-(1) of the NIH guidelines).
- 1a. Deliberate transfer of drug resistance trait to microorganisms that are unknown to acquire the trait naturally, if such acquisition could compromise use of the drug to control disease agents in humans, veterinary medicine or agriculture.

SAVE SUBMIT FOR APPROVAL Check Validations

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If necessary, scroll down through the NIH Guidelines. Click on the boxes next to the appropriate selections.

The screenshot shows the Penn IBC (Institutional Biosafety Committee) interface. At the top left is the Penn University of Pennsylvania logo. The top right shows a user profile for 'DemoIBC Researcher5' with notification and menu icons. The left sidebar contains 'Panel shortcuts' with options like 'Project Information', 'Personnel', 'NIH Guidelines', 'Material', 'Genes', 'Genome Editing', 'Target Recipients', 'Biosafety Containment', and 'Workflow & History'. The main content area displays a form for '21-169 : DemoIBC Researcher5' with a title 'III-D. Experiments that Require Institutional Biosafety Committee Approval Before Initiation'. A red arrow points to the checked boxes for items 1 and 4. At the bottom are buttons for 'SAVE', 'SUBMIT FOR APPROVAL', and 'Check Validations'.

Profile & Settings | IBC

Panel shortcuts
collapse all | expand all

- Project Information
- Personnel
- NIH Guidelines
- Material
- Genes
- Genome Editing
- Target Recipients
- Biosafety Containment
- Workflow & History

collapse all | expand all

21-169 : DemoIBC Researcher5 Registration created - Cancer cell migration murine model using cells mo...

III-D. Experiments that Require Institutional Biosafety Committee Approval Before Initiation

- 1. Experiments Using Risk Group 2, Risk Group 3, Risk Group 4 or Restricted Agents as Host-Vector Systems.
- 2. Experiments in which DNA from Risk Group 2, Risk Group 3, Risk Group 4, or Restricted Agents is Cloned into Nonpathogenic Prokaryotic or Lower Eukaryotic Host-Vector Systems.
- 3. Experiments Involving the Use of Infectious DNA or RNA Viruses or Defective DNA or RNA Viruses in the Presence of Helper Virus in Tissue Culture Systems.
- 4. Experiments Involving Whole Animals. (Do NOT check if ONLY generating transgenic rodents [III-E-3].)
- 5. Experiments Involving Whole Plants.
- 6. Experiments Involving More than 10 Liters of Culture.

SAVE SUBMIT FOR APPROVAL Check Validations

Scroll down or click “Material” in the Panel shortcuts. Fill out the section appropriately. Add the vector map by clicking on the purple “Drop files here or click to choose” button. Vector maps must be png, jpeg, doc, or pdf files.

The screenshot shows the Penn IBC registration interface. The top navigation bar includes the Penn University of Pennsylvania logo, a menu icon with a '0' notification, a bell icon with a '0' notification, and a user profile for 'DemoIBC Researcher5'. The left sidebar contains 'Panel shortcuts' with options like 'Project Information', 'Personnel', 'NIH Guidelines', 'Material' (circled in red), 'Genes', 'Genome Editing', 'Target Recipients', 'Biosafety Containment', and 'Workflow & History'. The main content area is titled '21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...'. The 'Material' section is expanded, showing a form with the following fields: 'Name of Material*' with the value 'pLenti-puro'; 'Upload Map of Expression Cassette*' with a purple button labeled 'Drop files here or click to choose' (pointed to by a red arrow with the text 'Click here to add vector maps'); a 'Documents to upload pending save:' section containing a file named 'addgene-plasmid-39481-sequence-242411-map.png' with a delete icon; and 'Generation of Vector System*' with a dropdown menu showing '3rd'.

Profile & Settings IBC

Panel shortcuts
collapse all | expand all

- Project Information
- Personnel
- NIH Guidelines
- Material**
- Genes
- Genome Editing
- Target Recipients
- Biosafety Containment
- Workflow & History

collapse all | expand all

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

Material

Name of Material* pLenti-puro

Upload Map of Expression Cassette* Drop files here or click to choose

Documents to upload pending save:

addgene-plasmid-39481-sequence-242411-map.png

Generation of Vector System* x 3rd

SAVE SUBMIT FOR APPROVAL Check Validations

Welcome, DemoIBC Researcher5

22

Scroll down or click “Genes” in the Panel shortcuts. To add genes to the registration, click the “Add Gene” button. Alternatively, if the project includes many gene targets, an Excel Spreadsheet may be uploaded by clicking on the “Drop file here or click to choose” button.

The screenshot displays the Penn IBC registration interface. The top navigation bar includes the Penn University of Pennsylvania logo, a menu icon, notification icons, and a user welcome message: "Welcome, DemoIBC Researcher5". The left sidebar contains "Panel shortcuts" with a list of categories: Project Information, Personnel, NIH Guidelines, Material, Genes (circled in red), Genome Editing, Target Recipients, Biosafety Containment, and Workflow & History. The main content area shows a registration title: "21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...". Below this, the "Genes" section is expanded, featuring a blue "Add Gene" button with a red arrow pointing to it and the text "Click here to add genes individually". To the right is the "Upload Genes" section with a purple button labeled "Drop file here or click to choose" and a red arrow pointing to it with the text "OR Upload an excel spreadsheet of genes, their biological activity, and species origin". Below the upload section are two questions with radio button options: "If any of the above genes are from a viral source, is it more than 2/3 of the viral genome?" (Yes/No) and "Will a deliberate attempt be made to obtain expression of the foreign sequence(s)*" (Yes/No). At the bottom, there are three buttons: "SAVE", "SUBMIT FOR APPROVAL", and "Check Validations". The page number "23" is visible in the bottom right corner.

If you add genes individually, the “Gene” box will pop up. Fill out the required information (1) before clicking the “Save” button (2) to add the gene to the registration.

The image shows a 'Gene' registration form with the following fields and options:

- Gene Name*: GFP
- Biological Activity*: Green fluorescent protein
- Source of Gene (species)*: A. victoria
- Promoter: CMV
- Is this gene from a viral source?: Yes No
- Will a deliberate attempt be made to obtain expression of the sequence?: Yes No

At the bottom of the form are buttons for 'Cancel' and 'Save'. A red arrow points to the 'Save' button with the text '2. Click Save'. Another red arrow points to the input fields with the text '1. Enter the appropriate information'.

Background elements include the University of Pennsylvania logo, a sidebar with 'Profile & Settings' and 'Panel shortcuts', and a top navigation bar with 'Welcome, IBC Researcher5'.

The gene has been added to the registration. If necessary, add additional genes by repeating these steps. If changes are needed for a specific gene, click on the blue pencil box to make edits or the red trash can button to delete the gene entry. Complete the "Gene" section.

 Penn UNIVERSITY of PENNSYLVANIA

Profile & Settings | IBC

Welcome, DemoIBC Researcher5

Panel shortcuts
collapse all | expand all

- Project Information
- Personnel
- NIH Guidelines
- Material
- Genes**
- Genome Editing
- Target Recipients
- Biosafety Containment
- Workflow & History

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

Genes

[+ Add Gene](#) ?

collapse rows - | expand rows +

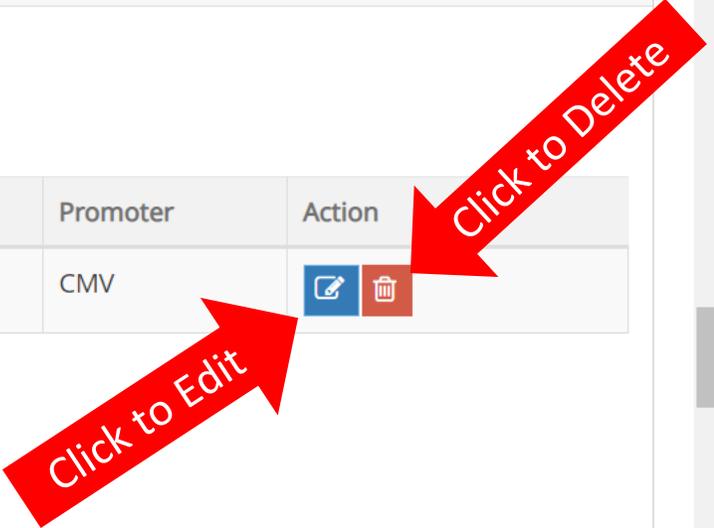
| Gene Name | Biological Activity | Source of Gene (species) | Promoter | Action |
|-----------|---------------------------|--------------------------|----------|---|
| GFP | Green fluorescent protein | A. victoria | CMV |   |

Upload Genes 

If any of the above genes are from a viral source, is it more than 2/3 of the viral genome? Yes No

[SAVE](#) [SUBMIT FOR APPROVAL](#) [Check Validations](#)

25



Scroll down or click “Genome Editing” in the Panel shortcuts. Respond “Yes” or “No” to the genome editing technology question. If you are using genome editing technology, additional boxes will appear. Fill out the information. To add genomic targets, click the “Add Genomic Target” box OR add an excel spread of genomic targets, their biological activities, species origin of the target, and the functional consequence of the editing by clicking the “Drop file here or click to choose” box.

Panel shortcuts

collapse all | expand all

- Project Information
- Personnel
- NIH Guidelines
- Material
- Genes
- Genome Editing**
- Target Recipients
- Biosafety Containment
- Workflow & History

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

Genome Editing

Are you using genome editing technology?* Yes No

Identify the system you are using* CRISPR/Cas9

Name and Species of Cas9 Nuclease* S. pyogenes

+ Add Genomic Target

Click here to add genomic targets individually

Upload Genomic Target* Drop file here or click to choose

OR Click here to add spreadsheet of targets

Method of Delivery: Nuclease* select some

Method of Delivery: Guide RNA* select some

The “Target” box will pop up. Fill out the appropriate information. Multiple selections may be made for the “Functional Consequence” by clicking more than one option from the drop-down menu.

The screenshot shows a web application interface with a sidebar on the left containing navigation items like 'Profile & Settings', 'Panel short', 'collapse all | expand', 'Project Information', 'Personnel', 'NIH Guidelines', 'Material', 'Genes', 'Genome Editing', 'Target Recipients', 'Biosafety Containment', and 'Workflow & History'. The main content area is a 'Target' modal form. The form has the following fields:

- Gene Name***: Text input containing 'CD47'.
- Biological Activity***: Text input containing 'Cell surface protein, promotes cell survival'.
- Functional Consequence***: A dropdown menu with a search bar containing 'x Deletion'. The dropdown list is open, showing options: 'Deletion', 'Insertion', 'Mutation' (highlighted in blue), 'Epigenetic Regulation', and 'Other'.
- Target Species***: A dropdown menu (partially obscured).

At the bottom of the form, there are two more fields:

- Method of Delivery: Nuclease***: Text input containing 'select some'.
- Method of Delivery: Guide RNA***: Text input containing 'select some'.

A red arrow points from the text 'Multiple options available!' to the 'Mutation' option in the dropdown menu. A blue 'Save' button is visible at the bottom right of the modal.

Click "Save" to add the genomic target to the registration. Continue adding genomic targets.

The image shows a web application interface with a modal window titled "Target". The modal contains the following fields:

- Gene Name*: CD47
- Biological Activity*: Cell surface protein, promotes cell survival
- Functional Consequence*: Deletion Mutation
- Target Species*: Human

At the bottom right of the modal, there are two buttons: "Cancel" and "Save". A red arrow points to the "Save" button with the text "Click here".

The background interface includes a sidebar with the University of Pennsylvania logo and a navigation menu with items like "Profile & Settings", "Panel short", "collapse all | expand", "Project Information", "Personnel", "NIH Guidelines", "Material", "Genes", "Genome Editing", "Target Recipients", "Biosafety Containment", and "Workflow & History". The main content area shows "Upload Genomic Target*" with a "Drop file here or click to choose" button, and two "Method of Delivery" dropdowns: "Nuclease*" and "Guide RNA*", both set to "select some".

Choose the “Method of Delivery” for the Nuclease and the Guide RNA from the drop-down menus that appear after clicking on the boxes.

 Penn UNIVERSITY of PENNSYLVANIA

Profile & Settings IBC

Welcome, DemoIBC Researcher5

Panel shortcuts
collapse all | expand all

- Project Information
- Personnel
- NIH Guidelines
- Material
- Genes
- Genome Editing
- Target Recipients
- Biosafety Containment
- Workflow & History

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

| | | | | |
|------|-------|--|-------------------|---|
| CD47 | Human | Cell surface protein, promotes cell survival | Deletion Mutation |   |
|------|-------|--|-------------------|---|

Upload Genomic Target*  Drop file here or click to choose

Method of Delivery: Nuclease*

Method of Delivery: Guide RNA*

- Protein
- Plasmid
- Viral Vector**
- Other

Target Recipients

Indicate the recipient(s) of the rsNA material (select all that apply)

- Animal
- Cells

29

If viral vector is selected, select the type of viral vector for Nuclease and Guide RNA delivery from the drop-down menus. Answer the remaining question.

Penn
UNIVERSITY of PENNSYLVANIA

Profile & Settings | IBC

Welcome, DemoIBC Researcher5

Panel shortcuts
collapse all | expand all

- Project Information
- Personnel
- NIH Guidelines
- Material
- Genes
- Genome Editing
- Target Recipients
- Biosafety Containment
- Workflow & History

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

| | | | |
|------|-------|--------------|--|
| CD47 | Human | Cell surface | |
|------|-------|--------------|--|

Upload Genomic Target*

Method of Delivery: Nuclease*

Type of Viral Vector for Nuclease Delivery*

- AAV
- Adenovirus
- Lentivirus**
- Retrovirus
- Other

Method of Delivery: Guide RNA*

Type of Viral Vector for Guide RNA Delivery*

Are the nuclease and guide RNA on the same Lentivirus?*

Yes No

30

Scroll down or click the “Target Recipients” link in the Panel shortcuts. Choose the appropriate targets and fill out the required information. If using animals, please answer “Yes” or “No” to the privately owned animals question. Privately owned animals are animals enrolled in clinical studies in the Vet School. This designation does not apply to research animals like mice or rats.

The screenshot shows the Penn IBC registration interface. The top navigation bar includes the Penn University of Pennsylvania logo, a hamburger menu with a '0' notification, a bell icon with a '0' notification, and a user profile for 'DemoIBC Researcher5'. Below this is a breadcrumb trail: 'Profile & Settings' > 'IBC' > '21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...'. The left sidebar contains 'Panel shortcuts' with a list of categories: Project Information, Personnel, NIH Guidelines, Material, Genes, Genome Editing, Target Recipients (circled in red), Biosafety Containment, and Additional review. The main content area is titled 'Target Recipients' and contains the following form fields:

- Indicate the recipient(s) of the rsNA material (select all that apply):
 - Animal
 - Cells
 - Modified Cells into Animals
- Type of Animal (include species and strain if mouse)*:
- Name and Species of Cells*:
- Will privately owned (client-owned) animals be used?*: Yes No

At the bottom of the form, a 'Microorganism' field is partially visible.

Scroll down or click “Biosafety Containment” from the Panel shortcuts. Choose the appropriate containment from the drop-down menu for the Biosafety Level (BSL) and Animal Biosafety Level (ABSL).

The screenshot shows the Penn IBC registration interface. At the top left is the Penn University of Pennsylvania logo. The top right navigation bar includes a hamburger menu with '0' notifications, a bell icon with '0' notifications, and a user profile for 'DemoIBC Researcher5'. The left sidebar contains 'Panel shortcuts' with a list of categories: Project Information, Personnel, NIH Guidelines, Material, Genes, Genome Editing, Target Recipients, **Biosafety Containment** (circled in red), and Additional review. Below this is 'Workflow & History'. The main content area shows a registration entry for '21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...'. The 'Biosafety Containment' section is expanded, showing two dropdown menus. The first is for 'Biosafety Level (BSL)*' with '2' selected. The second is for 'Animal Biosafety Level (ABSL)*' with '2' selected. A red arrow points to the '2' in the ABSL dropdown with the text 'Choose the appropriate containment level'. Below these are 'Comments*' and 'Additional review' sections, including a field for 'IACUC Protocol Number*'. The page number '32' is visible at the bottom right.

Multiple containment levels may be selected. If more than one containment level is selected, an explanation in the “Comments” box must be provided.

- Panel shortcuts
collapse all | expand all
- Project Information
 - Personnel
 - NIH Guidelines
 - Material
 - Genes
 - Genome Editing
 - Target Recipients
 - Biosafety Containment**
 - Additional review
 - Workflow & History

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

^ Biosafety Containment

This project will be conducted at Biosafety Level (BSL)*

This project will be conducted at Animal Biosafety Level (ABSL)*

Comments*

Provide comments here if two levels are selected

^ Additional review

IACUC Protocol Number*

Scroll down or click “Additional review” in the Panel shortcuts. Provide the required information for the additional review.

 Penn UNIVERSITY of PENNSYLVANIA

Profile & Settings | IBC

Welcome, DemoIBC Researcher5

Panel shortcuts
collapse all | expand all

- Project Information
- Personnel
- NIH Guidelines
- Material
- Genes
- Genome Editing
- Target Recipients
- Biosafety Containment
- Additional review**
- Workflow & History

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

Additional review

IACUC Protocol Number*

Workflow & History

| | Stage - Revision # | Created | Current Status | Status Date |
|-----------|----------------------------------|--------------------|--------------------------|---------------------|
| + Viewing | New Registration - revision #1.1 | 03/01/2021 3:27 PM | New Registration created | 03/01/2021 10:43 AM |

Status Requirement Completion State Revision Completed by Completed Date

34

Provide the IACUC protocol number(s) where the IBC registration number will be used

With all sections complete, click the “Check Validations” button to check if the registration is truly complete.

The screenshot shows the Penn IBC registration interface. At the top left is the Penn University of Pennsylvania logo. The top right shows a user profile for 'DemoIBC Researcher5' with a welcome message and notification icons. The main content area is titled '21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...'. It contains two sections: 'Additional review' and 'Workflow & History'. The 'Additional review' section has a form field for 'IACUC Protocol Number*' with the value '806746'. The 'Workflow & History' section contains a table with the following data:

| | Stage - Revision # | Created | Current Status | Status Date |
|---|---|--------------------|--------------------------|---------------------|
| + | New Registration - revision #1.1 Viewing | 03/01/2021 3:27 PM | New Registration created | 03/01/2021 10:43 AM |

At the bottom of the interface, there are three buttons: 'SAVE', 'SUBMIT FOR APPROVAL', and 'Check Validations'. A large red arrow points to the 'Check Validations' button with the text 'Click here to check for registration completion'. The page number '35' is visible in the bottom right corner.

The registration has been saved. All data field requirements have been met so the registration form has been completed. To submit the registration for pre-review, click the “Submit For Approval” button.

The screenshot displays the Penn IBC registration interface. At the top left is the Penn University of Pennsylvania logo. The top right shows a user profile for 'DemoIBC Researcher5' with zero notifications. The main content area features a green success message: 'Application saved: 03/01/2021 4:51 PM' and 'All data field validation requirements are currently being met.' Below this is a 'Save record as PDF' button and a 'Project Information' section. At the bottom, there are three buttons: 'SAVE', 'SUBMIT FOR APPROVAL', and 'Check Validations'. A red arrow points from the success message to the 'SUBMIT FOR APPROVAL' button.

Profile & Settings | IBC

Panel shortcuts
collapse all | expand all

- Project Information
- Personnel
- NIH Guidelines
- Material
- Genes
- Genome Editing
- Target Recipients
- Biosafety
- Containment
- Additional review
- Workflow &

collapse all | expand all

21-169 : DemoIBC Researcher5 - New Registration created - Cancer cell migration murine model using cells mo...

Home > IBC > Edit IBC Registration

✓ Application saved: 03/01/2021 4:51 PM
✓ All data field validation requirements are currently being met.

collapse all | expand all Save record as PDF

Project Information

Personnel

SAVE SUBMIT FOR APPROVAL Check Validations

Registration is saved and complete

Click here to submit

36

The registration has been successful submitted for pre-review. An email has been sent to the assigned Biosafety Officer. The Biosafety Officer will pre-review the registration.

The screenshot displays the University of Pennsylvania IBC (Institutional Biosafety Committee) interface. At the top, the Penn logo and navigation icons are visible. The user is logged in as 'DemoIBC Researcher5'. The main content area shows a green success message: 'Application saved and submitted for approval: 03/01/2021 4:56 PM'. A red arrow points to this message with the text 'Success!'. The left sidebar contains a 'Panel shortcuts' menu with options like 'Review Comments', 'Project Information', 'Personnel', etc. The main content area also includes a 'Save record as PDF' button and expandable sections for 'Review Comments' and 'Project Information'. At the bottom, a table shows the registration number '21-169'.

Profile & Settings | IBC

Panel shortcuts
collapse all | expand all

- Review Comments
- Project Information
- Personnel
- NIH Guidelines
- Material
- Genes
- Genome Editing
- Target Recipients
- Biosafety Containment
- Additional review
- Workflow & History

21-169 : DemoIBC Researcher5 - Pre-review - Cancer cell migration murine model using cells mo...

Home > IBC > Edit IBC Registration

✓ Application saved and submitted for approval: 03/01/2021 4:56 PM

Success!

collapse all | expand all

Save record as PDF

Review Comments

Project Information

| | | |
|---------------------|--------|----|
| Registration Number | 21-169 | 37 |
|---------------------|--------|----|

When pre-review is complete, you will receive an email. Login to the website. Access the “All My Tasks” page. If this is not the landing page, access your tasks by clicking the tasks button (1). To access the registration to review the pre-review comments, click on the task message (2).



1. Click here to access “All My Tasks” page

Navigation bar with a menu icon and a notification badge containing the number 1, a bell icon and a notification badge containing the number 0, and a user profile section that says "Welcome, DemoIBC Researcher5" with a dropdown arrow.

Profile & Settings

IBC

All My Tasks

Filter Search by Task meta-data

Type:
Filter by Task Type

PI
Select PI users

Keyword:

Completed Status:
Incomplete

Filter Tasks → Reset Filters

My Assigned Tasks Following Away Schedule

| Type | Action | Message | Due Date | Task Created | |
|-------|------------------------|--|----------|---------------------|----|
| + IBC | Modifications required | Pre-review for 21-169 has been completed and requires modifications. | | 03/03/2021 11:00 AM | 38 |

2. Click here to access registration

Once in the registration, click on “Review Comments” in the Panel shortcuts (1). To review specific comments, click the “+” button (2). The conversation button can be used to respond to the comment, if necessary (3). Click the “Section/Field” link to be taken directly to the section (4).

Review Comments

1. Click here

- Project Information
- Personnel
- NIH Guidelines
- Material
- Genes
- Genome Editing
- Target Recipients
- Biosafety Containment
- Additional review
- Workflow & History

2. Click here to view specific comments

21-169 : DemoIBC Researcher5 - Pre-review - Cancer cell migration murine model using cells mo...

Filter by section: Select one
Filter by status: All

| # | Section | Created by | Date | Section/Field | Action |
|---|---------|-----------------|---------------------|---------------------|---|
| 1 | #1.1 | SARAH J CAPASSO | 03/03/2021 10:52 AM | Project Information |  |

4. Click here to move to section

3. Click here to start respond to comment

Status: Open
Type: Required Change
Comment: Please add a more detailed title

Once at the appropriate section, click on the red comment box to view the comment again (if necessary). Make the appropriate changes.

The screenshot displays the Penn IBC system interface. At the top left is the University of Pennsylvania logo. The top right shows a user profile for 'DemoIBC Researcher5' with a welcome message, a notification bell icon with '0', and a menu icon with '1'. Below the header, there are tabs for 'Profile & Settings' and 'IBC'. A left sidebar contains 'Panel shortcuts' with options like 'Review Comments', 'Project Information', 'Personnel', etc. The main content area shows a dropdown for '21-169 : DemoIBC Researcher5 - Pre-review - Cancer cell migration murine model using cells mo...'. Below this is a 'Project Information' section with a table of details:

| Project Information | | ✓ | ✎ | 📄 |
|---------------------------------|--|---|---|---|
| Registration Number | 21-169 | | | |
| Expiration Date (mm/dd/yyyy) | | | | |
| Title* | Cancer cell migration murine model using cells modified with lentiviral vect | | | |
| | 121 remaining | | | |
| This registration will involve* | Generating and/or Using rsNA Materials | | | x |
| rsNA* | Lentivirus | | | x |
| IBC Biosafety Officer ? | CAPASSO, SARAH (sarahcap) | | | x |

A red arrow points from the bottom right towards the red comment box icon in the top right of the project information section.

If necessary, comments may be filtered by section and/or status. Once changes have been made, click the “Review and Submit” button at the bottom of the page.

The screenshot shows the Penn IBC interface. At the top left is the Penn University of Pennsylvania logo. The top right shows a navigation menu with 1 item, a notification bell with 0 items, and a user profile for 'Welcome, DemoIBC Researcher5'. Below the header, there are tabs for 'Profile & Settings' and 'IBC'. A sidebar on the left contains 'Panel shortcuts' with options like 'Review Comments', 'Project Information', 'Personnel', 'NIH Guidelines', 'Material', 'Genes', 'Genome Editing', 'Target Recipients', 'Biosafety Containment', and 'Additional review'. The main content area is titled '21-169 : DemoIBC Researcher5 - Pre-review - Cancer cell migration murine model using cells mo...'. Underneath, there is a 'REVIEW COMMENTS' section with two filters: 'Filter by section' (a dropdown menu set to 'Select one') and 'Filter by status' (a dropdown menu set to 'All'). Below the filters is a table with columns for '#', 'Revision', and 'Action'. The table contains three rows of data. A red arrow points to the 'Filter by status' dropdown, and another red arrow points to the 'REVIEW AND SUBMIT' button at the bottom of the page.

| # | Revision | Action |
|-----|----------|---------------|
| + 1 | #1.1 | [Action Icon] |
| + 2 | #1.1 | [Action Icon] |
| + 3 | #1.2 | [Action Icon] |

Buttons at the bottom: SAVE, REVIEW AND SUBMIT, Check Validations

Click the “Confirm and Submit” button to continue with registration submission. An email will be sent to the assigned Biosafety Officer.

Profile & Settings | IBC

Home > IBC Registration Comparison View

IBC Registration Comparison View

← Go back to current record

Your changes have been saved but **THIS RECORD HAS NOT YET BEEN SUBMITTED FOR APPROVAL.** Please review your changes from the previous submitted version connected below. If you need to make additional modifications, go back to input those changes before submitting. Otherwise, please confirm your submission.

CONTINUE EDITING | CONFIRM AND SUBMIT

collapse all | expand all

Workflow & History

Revisions You Are Comparing

After re-review is complete, you will receive an email prompting you to certify the registration. Login to the website and navigate to the “All My Tasks” page. Click on the task message to enter the registration.

Profile & Settings IBC

All My Tasks

Filter Search by Task meta-data

Type: Keyword: Completed Status:

PI

Tasks → Reset Filters

My Assigned Tasks Following Away Schedule

| Type | Action | Message | Due Date | Task Created | |
|-------|--------|--|----------|---------------------|--|
| + IBC | Review | IBC Registration 21-169 Requires PI Certification. | | 03/03/2021 11:34 AM | |

The “Certification Form” section will be at the top of the page. Click the “I Certify this IBC Registration” box (1). Then click the “Submit” button (2). An email will be sent to the assigned Biosafety Officer and the registration will be added to an IBC meeting for review.

The screenshot displays the Penn University of Pennsylvania IBC portal interface. At the top left is the Penn logo. The top right shows a navigation menu with a hamburger icon and a notification bell icon with a '0' badge. Below the logo is a 'Profile & Settings' tab and an 'IBC' tab. The main content area is titled '21-169 : DemoIBC Researcher5 - Trainings & Certification - Cancer cell migration murine model using human ce...'. The 'Certification Form' section is expanded, showing a checkbox labeled 'I Certify this IBC Registration*' with a yellow checkmark. A red arrow points to this checkbox with the text '1. Click here to certify'. Below the checkbox is a blue 'Submit' button, with a red arrow pointing to it from the right, labeled '2. Click here to submit'. Below the certification form are sections for 'Review Comments', 'Project Information', 'Personnel', and 'NIH Guidelines', each with a dropdown arrow and a red square icon. The bottom right corner of the page shows the number '44'.

What happens next?

- Your registration will be reviewed at an IBC meeting.
- Your registration will either be approved and you will receive an approval letter OR your registration will require modifications. The assigned Biosafety Officer will notify you of this decision through the website.