



eagle-i

Welcome to eagle-i

Open network. Open access. Open source.

eagle-i is a free, web-based application that collects information about biomedical research resources available at participating universities, and describes them so that researchers can easily search for and discover the tools they need, accelerate their research, and do more with less.

The eagle-i platform consists of two primary components:

- The eagle-i **search engine** is semantic and ontology-driven. When a search string of one or more characters is typed into the search bar, auto-suggest displays a list of possible options. You can select one of the suggestions by clicking on it, or continue to complete the search string to get more precise suggestions. By default, the search application searches all institutions and all resources within the eagle-i network, but you can filter by a single institution, core laboratory, or type of resource.
- The **SWEET** (Semantic Web Entry and Editing Tool) is a data collection tool that allows anyone with appropriate credentials to capture and manage information about research resources, people, and organizations within their institution and then share this information with the eagle-i Network. Depending on the workflow chosen by each member institution, different users may be responsible for adding resources and annotations, and for checking the information for accuracy and consistency before it is made available in the search application.

In continuous development since early 2010, eagle-i is now a mature platform in use at 25 institutions across the United States. The free software is an open source project, and we welcome institutions adopting it and participating in this growing network. The data in the system is also open access; anyone — regardless of affiliation — is welcome to [search for resources](#) or [download the Linked Open Data directly](#).

eagle-i Resources

eagle-i collects information about the following types of biomedical research resources:

- [Biological Specimens](#)
- [Antibodies](#)
- [Databases](#)
- [Cell Lines](#)
- [Human Studies](#)
- [Chemical Reagents](#)

- [Instruments](#)
- [Organisms and Viruses](#)
- [Cores Labs and other Organizations](#)
- [People](#)
- [Protocols and Documents](#)
- [Reagents](#)
- [Research Opportunities](#)
- [Services](#)
- [Software](#)
- [Constructs](#)
- [Gene Knockdown Reagents](#)
- [Microarrays](#)
- [Nucleic Acid Reagents](#)
- [Protein Reagents](#)
- [Chemical Libraries](#)
- [Nucleic Acid Libraries](#)
- [Peptide Libraries](#)
- [Organism Libraries](#)

Note: Sharing information with eagle-i **does not necessitate** sharing the resource with anyone who asks; resource providers retain control over when, how, and under what conditions their resources may be used.

About These Training Materials

These training materials correspond to Application Version: 2.0-MS1.11 / Ontology Version: 1.7.7 in the SWEET, and are intended as a reference guide for users entering and maintaining information about resources at their institution. Additional documents and videos can be found at: <http://open.med.harvard.edu/display/eaglei/Training>.

The development of training materials was supported by NIH contract "open-i" (101180SB23), which aims to make Linked Open Data available from four Clinical and Translational Science institutions: Harvard University, Vanderbilt University, Oregon Health and Sciences University and Vanderbilt University. These materials will support the ongoing use and operational support of the servers, databases, and tools necessary for the LOD survivability at the open-i sites.

These documents may also be adapted/repurposed for any institution that has adopted the eagle-i software.

Using the SWEET Training Server

A training server where users can practice adding and editing records using the SWEET is available at: <https://training.eagle-i.net:8443/datatools/>. Records entered on the training SWEET will never be available in the search application, although other training users will be able to see and possibly modify them if they are left [unlocked](#). The dataset is periodically refreshed by Central eagle-i staff.

To access the SWEET Training Server, log in with username: **L4** and password: **Level4**. This will provide a demonstration of what the most comprehensive SWEET access level looks like. Alternatively, you may login using a different level of access with one of the following usernames/passwords: L3/Level3; L2/Level2; L1/Level1.

For more details on which actions are permitted using the different permission levels, see the section on [Access Level Details](#).

Glossary of Common Terms

ACCESS PERMISSION LEVEL – determines which actions you can take to modify records in different states. Determined by your role and assigned by your institutional administrator.

ANNOTATION – refers to both the activity of describing the properties of a resource, and to the descriptions themselves. (e.g. You annotate a record by filling out its fields, thus creating annotations.)

CURATION – describes a range of activities and processes related to the creation, management, maintenance, and validation of information in eagle-i. All records must conform to certain standards before being published in the repository. Data curators provide data quality assurance by ensuring that resources in the eagle-i repository are accurate, up-to-date, and described in a manner that is both consistent with other, similar resources and useful to search users.

FIELD – each record contains multiple fields which each describe one facet of the resource. Fields are determined by properties in the ontology.

LIFECYCLE – refers to the different stages in the typical lifespan of record as it passes through the eagle-i workflow, from creation through removal/preservation. Each stage of the lifecycle corresponds to a different record status.

ONTOLOGY – a formal structural framework used to represent concepts and relationships in a certain domain. The eagle ontology describes groups (classes) of terms relating to biomedical research.

RECORD – a digital form used to describe each instance of a resource, person, or organization in the eagle-i repository.

REPOSITORY – the back-end database that stores eagle-i resource information entered using the SWEET.

ROLE – the tasks an eagle-i user is responsible for completing at his or her institution. Data collection, data entry, and data management/curation (or some combination thereof) are all examples of different roles a user may have.

SEARCH APPLICATION – the search engine allowing users to browse or search for published eagle-i resources from all member institutions.

STATUS/STATE – refers to the stage of a record in the workflow. The four eagle-i states are: Draft (in progress), In Curation (in review), Published (publicly visible), and Withdrawn (retired).

STUB – an unfinished record created from within another record, containing only a name and type. Stub records almost always require further annotation in order to be considered valid for publication.

SYNONYM – an alternate name for a term. Synonyms have an equivalent meaning to the preferred term and will often be an abbreviation or less formal terminology. They are captured in the ontology to aid in resource annotation and retrieval, and can be used interchangeably in the autosuggest.

SWEET – Semantic Web Entry and Editing Tool. The tool used to enter, modify and maintain information about eagle-i resources. Sometimes referred to as simply the data tool.

TERM – controlled vocabulary terms must be selected in fields that are populated from the ontology. If the most accurate term to describe a resource is not currently in the ontology, users can request that it be added. Most terms have definitions and synonyms.

TYPE – refers to the hierarchical categories of concepts (e.g. resources, organizations, people) in the eagle-i ontology. Every record in the SWEET has a Type field which must be filled with term corresponding to either a type (parent) or sub-type (child). Also known as “Classes.”

Accessing the SWEET

SWEET *Semantic Web Entry & Editing Tool*

The eagle-i SWEET (**S**emantic **W**eb **E**ntry and **E**dit**I**ng **T**ool) is eagle-i's web-based data entry tool. Anyone with appropriate credentials can use this tool to enter and manage data in the eagle-i repository. Resources published in the SWEET are visible to the public in the [eagle-i search application](#).

Each institution that uses eagle-i software has a separate installation of the SWEET. To manage resources related to a particular institution, you must have login access to that specific SWEET.

Requesting a new user account

Login credentials for the SWEET are assigned by each institution. If you need access to multiple institutions, you must request access separately for each one.

To request login credentials:

1. Find the URL of your institutional SWEET: <https://www.eagle-i.net/help/data-entry-tool-links/>. Click the link to open the SWEET.
2. On the login screen, click **Request your username and password**.
3. The Feedback dialog opens. Provide the required information and select **Entering resources into the eagle-i web application**.
4. Click on **Submit** when done.

Changing or resetting your password

You can change or reset your password at any time. To change your SWEET password:

1. Log into your institutional SWEET using your current password.
2. Click Change Password.
3. A repository login dialog appears. Log in to the repository with your current credentials.
4. The Change Password dialog appears. Type your current password. Type a new password (twice). Click **Submit** to save the new password or **Reset Form** to clear the fields.

Navigating the SWEET Menu

The following menu tabs provide navigation from anywhere in SWEET:

- **eagle-i Home**—Opens the eagle-i home page, including the eagle-i Search engine.
- **Institution Home**—Opens your institution specific home page where you can find summary lists of participating resource providers at your institution as well as other useful links.
- **Help**—Opens the online SWEET Help.
- **Ontology Browser**—Allows you to explore the eagle-i ontology. See the [Ontology Browser section](#) for more information.
- **Change Password**—Opens the [change password dialog](#).

Sending Feedback

The Feedback button located at the bottom of all eagle-i pages opens a feedback form where you can submit questions or comments.

eagle-i Feedback

We appreciate your interest in the eagle-i Network. Please use the form below to submit a question, comment or other feedback. Someone will contact you within 2 business days.

If you are looking for general information about the eagle-i Network or eagle-i Consortium, please visit www.eagle-i.net.

Name: *

Email Address: *

Phone:

Institution: *

Subject: *

I have a question or feedback about: (select one)

I would like to receive news, announcements and other updates about the eagle-i Network.

Comments: *

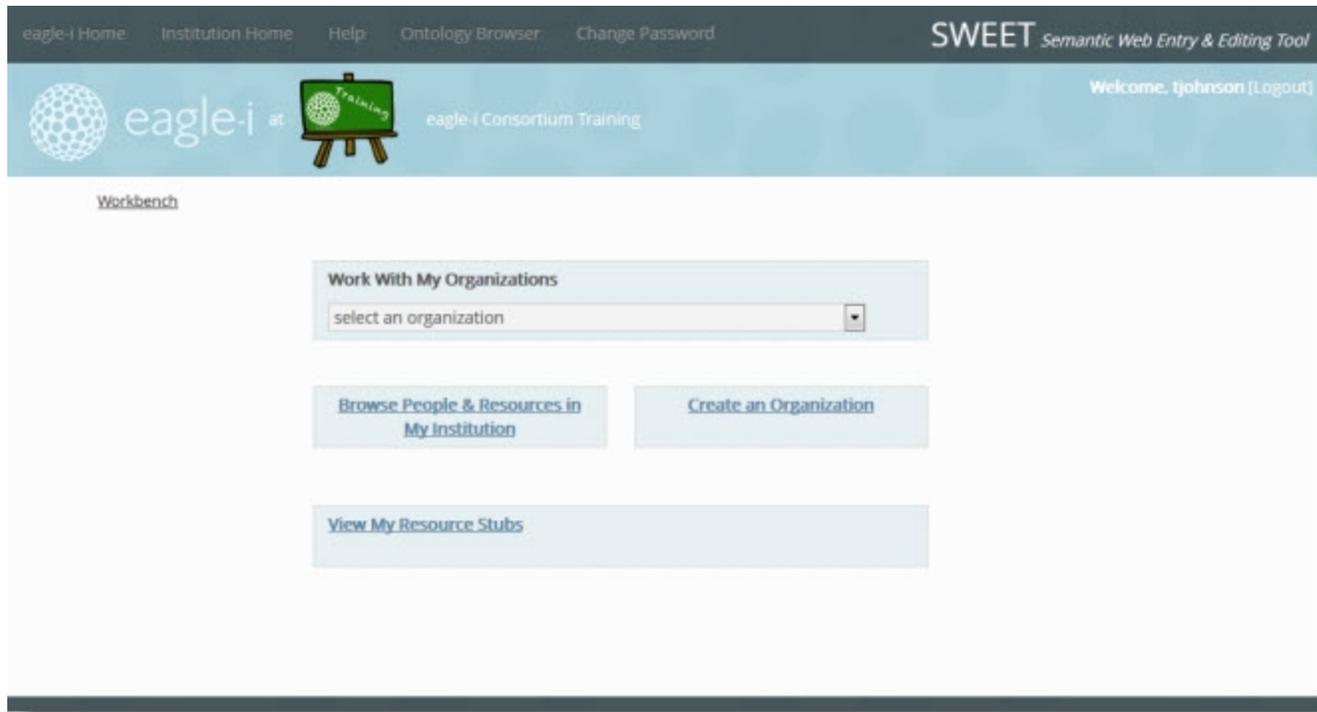
*** Required**

To leave feedback:

1. Click Feedback on the right side of the page.
2. Complete all required fields. Click Submit.

Navigating the Workbench

After logging into the SWEET, the first page you see is the Workbench.



From the Workbench you have access to the following:

Work With My Organizations

select an organization

Work With My Organizations — This menu allows quick access to organizations within your institution (with the exception of private companies). Note that this includes all organizations at your institution, not just ones created or owned by you.

[Browse People & Resources in My Institution](#)

Browse People & Resources in My Institution — Allows you to browse lists of people, organization (including private companies), and resource records within your institution. See [Navigating Lists](#) for more information.

[Create an Organization](#)

Create an Organization — Creates a new organization record, such as a research or core laboratory, to which you can subsequently add descriptive information and resources.

[View My Resource Stubs](#)

View My Resource Stubs — Stub records are incomplete records that were created as links from within another record, and contain only a name and type. Until these records have been edited and saved, your stubs are listed in the **View My Resource Stubs** section, so it is easy to find and annotate them more completely. See [the Resource Stubs section](#) for more information.

About Records

Records are web forms used to add or modify information in eagle-i. A single record describes a single resource, person, or organization.

The screenshot shows a web interface for a record titled "Deltavision CoreDV Widefield Deconvolution System". The breadcrumb trail is "Workbench > Advanced Light Microscopy Core Laboratory > Deltavision CoreDV Widefield Deconvolution System". On the left is a sidebar for "Advanced Light Microscopy Core Laboratory" with a "switch organizations" link and a list of "All Resource Types" including Biological Specimen, Database, Human Study, Instrument, Organism or Virus, each with an "add" link. The main content area has "Form Actions" (Edit, Lock, Duplicate, Delete) and "Workflow Actions" (Return to Curation, Withdraw). A "Check Links to This" button is on the right. A green arrow icon with a 'P' is at the bottom right. Three yellow callout boxes with arrows point to: 1) the breadcrumb trail, 2) the "Form Actions" and "Workflow Actions" buttons, and 3) the "switch organizations" link.

Return to the workbench or the owning organization for this resource.

The header displays **Form Actions** and **Workflow Actions**.

Switch to another organization without returning to the Workbench.

Navigate to any other resources also owned by this organization using the sidebar links.

Note: Fields available within forms change based on the specific sub-type of the record; for example, choosing Antibody as a sub-type of reagent will bring up different fields than choosing Cell line. In general, it is best to select the most appropriate top-level fields before continuing editing a form.

Navigating Records

Every record form is composed of the following sections:

Left Sidebar

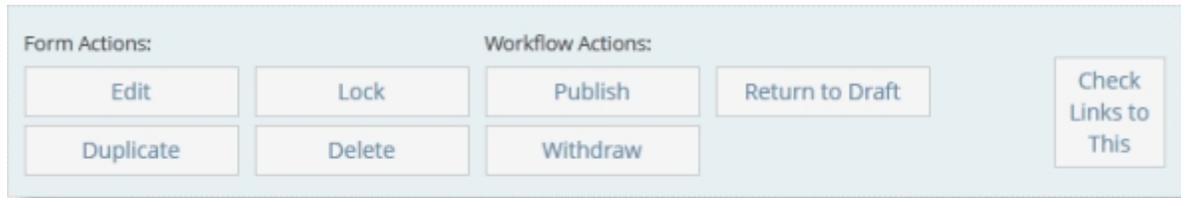
The sidebar to the left of each record provides the ability to navigate through the resources associated with that organization. From the sidebar, you can select the following:

- **Name of the selected organization** — the name in bold type at the top is the organization associated with the selected resource. Selecting the name link opens the overview record for that organization.
- **Switch Organizations** — click to open a drop-down list of all other resource providing organizations within your institution. Click to select a different organization.

- **View All Resource Types** — click any of the resource type names to see any resources of that type belonging to this organization, or click **All Resource Types** at the top to see all resources associated with this organization.
- **Add New** — click to add a new resource of that type to this organization.

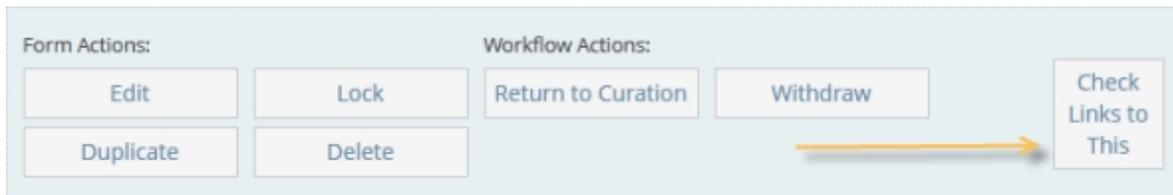
Form Actions and Workflow Actions panel

Located at the top of page. Use **Form Actions** to: [edit](#), [duplicate](#), [delete](#), and [lock and unlock](#) records. Use **Workflow Actions** to [change the status](#) of any record. [show me](#)



Note: The specific actions that display on each record depend on its workflow status and whether or not it is currently being edited. Actions may display but not currently be available; these appear grayed out.

Check Links to This



After a form has been saved for the first time, this button appears in the workflow actions section at the top of the record. Clicking this button displays a list of other resources that reference this one.

Advanced Light Microscopy Core Laboratory

[switch organizations](#)

All Resource Types

[Biological Specimen](#) [add new](#)

[Database](#) [add new](#)

[Human Study](#) [add new](#)

[Instrument](#) [add new](#)

[Organism or Virus](#) [add new](#)

[Protocol](#) [add new](#)

[Reagent](#) [add new](#)

[Research Opportunity](#) [add new](#)

Form Actions:

Workflow Actions:

[Return to Curation](#)
[Withdraw](#)
[Check Links to This](#)

Click to display a list of the records that contain a link back to this one.

Organization Name* Advanced Light Microscopy Core Laboratory

Organization Type*
 All Resources
 Created By Me
 Locked By Me

Filter by: Type: All Status: All Resource Provider: All [Go](#)

Resources that link to Advanced Light Microscopy Core Laboratory

Consider these links when sending to curation, publishing, withdrawing or deleting the resource. See help documentation for more information about referential integrity.

Organization Additional < previous 1 - 20 [next >](#) 20 Actions

Resource Name	Type	Date	Creator	Status	
Applied Precision SoftWorx Workstation	Acquisition computer	2010-07-30	mhan		edit delete lock
Advanced Light Microscopy Core Laboratory					
Bitplane Imaris workstation	Computer cluster	2010-07-30	mhan		edit delete lock
Advanced Light Microscopy Core Laboratory					

Main Body

This area is located in the center of the page and contains all the fields used to describe the resource, beginning with the Name field and ending with the Comments and Curator Notes fields.

Organization Name*	<input type="text"/>		
Organization Type*	<input type="text" value="Organization"/>		Request a term.
Organization Description	<input type="text"/>		
Organization Additional Name	<input type="text"/>		
Contact	<input type="text" value="<none>"/>		
Email	<input type="text"/>		
Mailing Address	<input type="text"/>		
Phone Number	<input type="text"/>		
Affiliation	<input type="text" value="<none>"/>		
Secondary affiliation	<input type="text" value="<none>"/>		
Website(s)	<input type="text"/>		
<i>Comments and curator notes will not be published.</i>			

Any information entered into [the form fields](#) in the main body of the record will be visible in the search application after the record is published, except for address, contact information (hidden for privacy reasons) and the Comments and Curator Notes fields.

Metadata

This section is located at the bottom of the page. Click ► to expand or collapse this area. Information entered in this section is NOT visible using eagle-i search.

The Metadata section includes:

- The **unique identifier** for the record (URI).
- **Provenance data** about the record (when and by whom it was created and last modified).
- **Hidden fields** that have been removed from the main body of the record due to ontology changes. In most cases, these are because we no longer collect that information, or collect it in another field instead.
- **Saved term requests.**
- Saved information from the **Comments and Curator Notes** fields.

Before publishing, you should check this section for any data that should be migrated to another more appropriate field in the main body of the page, or for any notes from other users that could be important.

▼ Metadata	
Eagle-i unique ID	http://harvard.gq.eagle-i.net/i/0000012c-64ed-0030-c437-ff0b80000000
Metadata properties:	
Last Modification Date	2013-02-25T12:13:10.714-06:00
Creation Date	2010-11-19T10:20:06.264-06:00
Creator	rgarces (Robert Garces)
Workflow State	Published
Contributor	tjohnson (Tenille Johnson)
Other properties:	
Comments	TJ: Website URL updated on 2/25/13. Director to contact with updates services in March.

Types of Fields

Most record forms contain a combination of free text fields, fields populated with controlled vocabulary from the [eagle-i ontology](#), and fields populated with links to other eagle-i records. This screen capture is an example of the types of fields used to describe a new instrument:

The screenshot displays a form for creating a new instrument record. The fields and their annotations are as follows:

- Instrument Name***: A required text input field. Annotation: "Name and Type are required fields on every record."
- Instrument Type***: A dropdown menu with "Instrument" selected and a "Request a term." link. Annotation: "Name and Type are required fields on every record."
- Instrument Description**: A large free text area. Annotation: "Free text field where users can fill in any relevant information not captured in the other fields." To its right are refresh and add icons. Annotation: "Click to add multiple additional names."
- Instrument Additional Name**: A text input field with refresh and add icons. Annotation: "Click to add multiple additional names."
- Location**: A read-only dropdown menu showing "Flow Cytometry Core <". Annotation: "Read-only location field displays the organization associated with the resource."
- Contact**: A dropdown menu with "<create new>" selected. Below it is the text: "A resource stub will be created. It can be completed after". Below that are "Person Name*" (text input) and "Person Type*" (dropdown with "Person" selected). Annotation: "Select <create new> to create a new record from with another record, such as a resource contact or manufacturer."
- Related Technique**: A dropdown menu with "Technique" selected and a "Request a term." link. Annotation: "Indicates an ontology field."

Free Text Fields

These fields can accept any standard text:

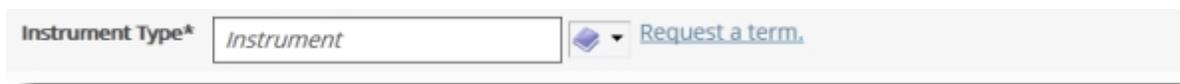


A screenshot of a form field labeled "Instrument Description". The field is a large, empty text box. To the right of the text box are two icons: a circular refresh icon and a plus sign icon.

For specific guidelines on the format and content of what should be annotated in each free text field, see the appropriate topic in the [SWEET General Annotation Guide](#).

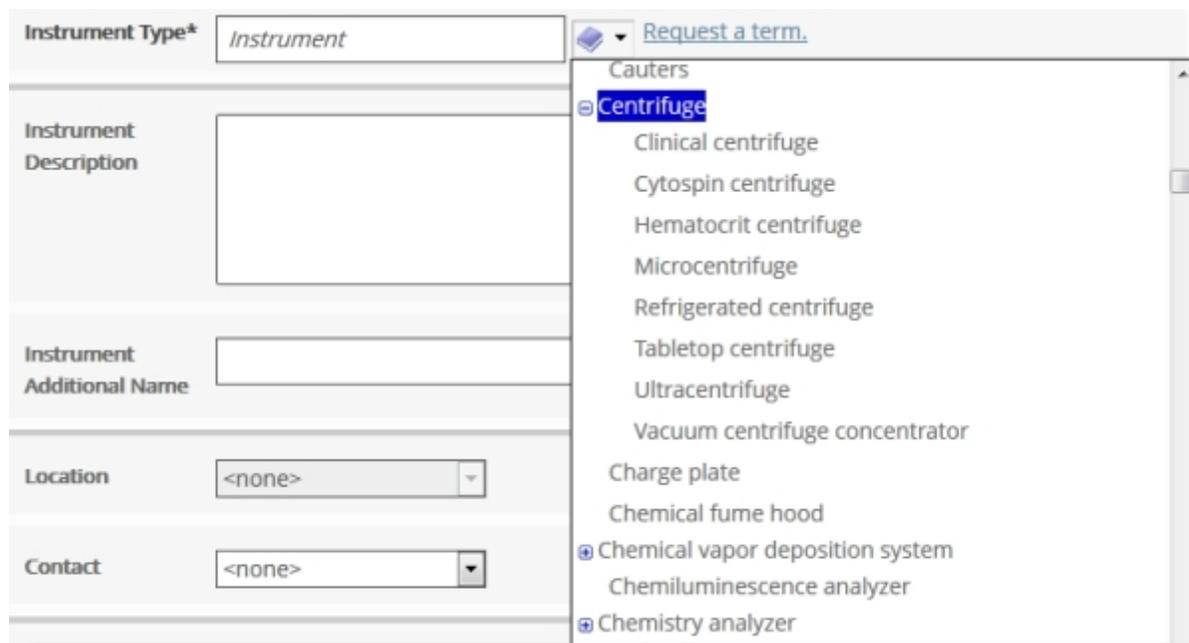
Ontology / Controlled Vocabulary Fields

An icon depicting a blue book denotes a field that must be annotated using a controlled vocabulary term from the ontology.



A screenshot of a form field labeled "Instrument Type*". The field contains the text "Instrument". To the right of the text box is a blue book icon with a dropdown arrow, and a button labeled "Request a term.".

Choose a term either by typing in the field and selecting one of the auto-suggestions, or by clicking the icon to browse a list of possible terms, arranged in a hierarchy. Clicking the + or - next to a term in the list will close or open that branch of the hierarchy. Clicking on a term will select it for the field.



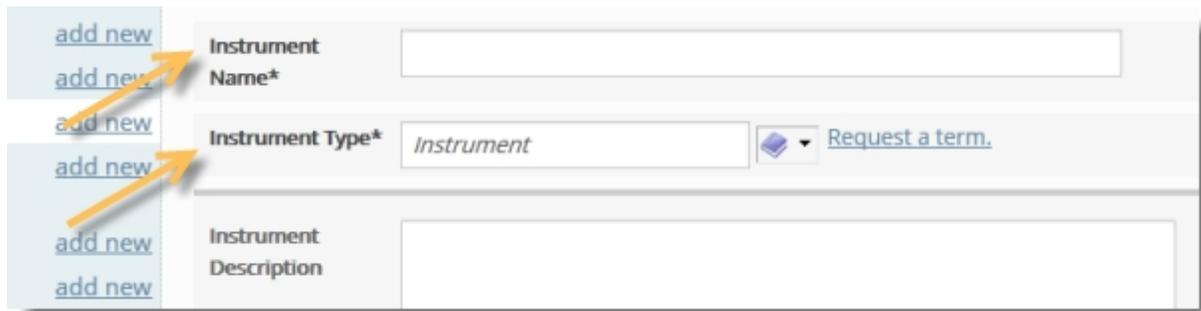
A screenshot of a form with multiple fields. The "Instrument Type*" field is selected, and a dropdown menu is open showing a list of instrument types. The list includes: Cauters, Centrifuge (highlighted), Clinical centrifuge, Cytospin centrifuge, Hematocrit centrifuge, Microcentrifuge, Refrigerated centrifuge, Tabletop centrifuge, Ultracentrifuge, Vacuum centrifuge concentrator, Charge plate, Chemical fume hood, Chemical vapor deposition system, Chemiluminescence analyzer, and Chemistry analyzer. The "Instrument Description" field is empty. The "Instrument Additional Name" field is empty. The "Location" field is set to "<none>". The "Contact" field is set to "<none>".

If the exact term needed is not available in the ontology, select the next most accurate term, and submit a term request for the more specific one you would like to use. See [Submitting a Term Request](#) for more detail.

Synonyms for the preferred ontology term will show up in autosuggest. If you select a synonym, the preferred term will automatically display in the field.

Required Fields

For each resource type, there are a number of fields that are required in order for the record to be valid. Required field titles are marked with **bold text** and an asterisk (*).



A screenshot of a form with several input fields. The fields are: 'Instrument Name*' (text input), 'Instrument Type*' (dropdown menu with 'Instrument' selected and a 'Request a term.' link), and 'Instrument Description' (text input). On the left side, there are six 'add new' links. Two orange arrows point from the first and second 'add new' links to the 'Instrument Name*' and 'Instrument Type*' fields respectively, indicating that these fields are required.

Repeatable Fields

Most form fields allow multiple entries for the same field, for example, multiple contacts for a resource or organization, or multiple topics for a Human Study. If more than one value applies to a particular field, each separate value should be entered in a separate line.



A screenshot of a form showing three repeatable rows for a 'Topic' field. Each row has a 'Disease' dropdown menu, a text input field, and a 'Request a term.' link. The first row has 'fallopian tube neoplasms' in the text input. The second row has 'ovarian neoplasms'. The third row has 'peritoneal neoplasms'. To the right of each row are icons for refreshing (a circular arrow), removing (a minus sign), and adding (a plus sign) the row.

The plus, minus and refresh icons to the right of each repeatable field allow you to add, remove and clear additional lines:

-  — clears the information without removing the line.
-  — removes the line entirely from the form.

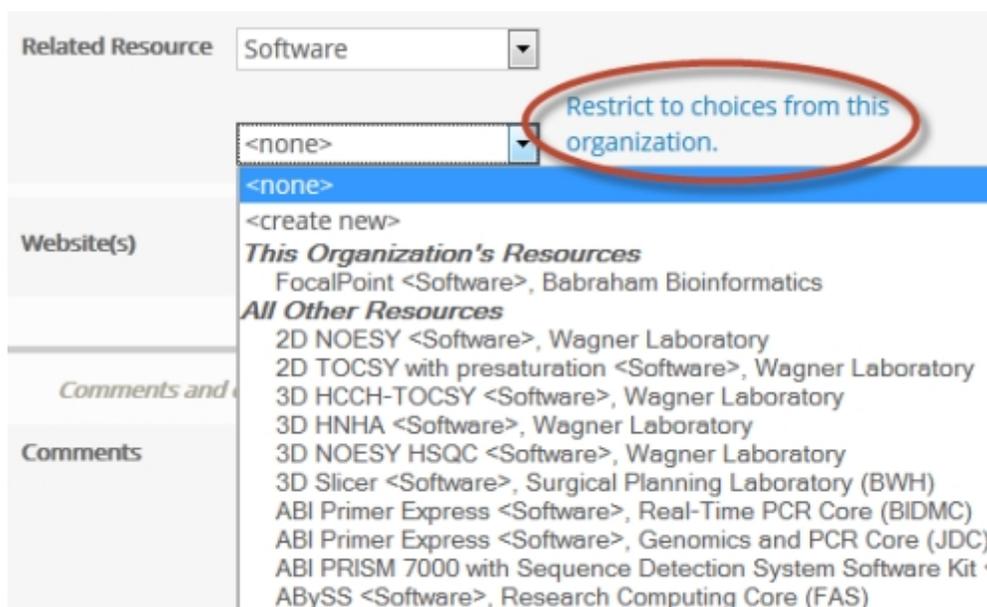
-  — adds additional lines to the field. New lines can only be added from the last line in every repeatable field.

Most fields When you see **NR** on the [field annotation tables](#), it indicates a non-repeatable field.

Fields Linking to Other Records

In a field that links to other eagle-i records, you can either link to an existing record or create a new record from within that field. To see if the resource you want to link to already has an existing eagle-i record, browse the drop-down list for that field. By default, most display a list of only the records associated with that particular organization.

To see all possible records from the entire institution, toggle the **See choices from all organizations** link to the right side of the drop-down list. Records within that organization will still be listed at the top, under the header: **This Organization's Resources**. The rest will be listed in alphabetical order, underneath the header: **All Other Resources**. Toggle the **Restrict to choices from this organization** link to return to only a view of the resources associated with that organization.



In certain fields, a third list of existing records may display at the top, under the heading: **Commonly Used Resources**. See [Centrally Curated Resources](#) for more details.

Type a letter to jump to the beginning of that section of the list. If the record you want to link to does not exist, select <create new> in the drop-down list.

Example: Suppose you are creating a new instrument record for a microscope, but there is no existing record for the manufacturer. Using this option, you can create a new organization stub record for the manufacturer while still editing instrument record.

Manufacturer Organization

<none>

<none>

<create new>

Developed by

Commonly Used Resources

- 3M <Private Company>
- A.E. Thorson & Sons Manufacturing <Private Company>
- A.M. Bickford Inc. <Private Company>
- AB Sciex <Private Company>
- Abaxis <Private Company>
- Abbott Laboratories <Private Company>
- Abcam plc <Private Company>
- AbD Serotec <Private Company>
- ABM, Inc. <Private Company>
- Abnova Corporation <Private Company>

Exchange facilitator

Inventory Number

Model Number

Related grant number

Manufacturer Organization

<create new>

A resource stub will be created. It can be completed after saving.

Organization Name*

Organization Type* Organization

To create a new manufacturer for an instrument, select **<create new>** in the manufacturer field.

Complete the **Name** and **Type** fields and then save the instrument record.

See the section on [Linking Records](#) for more information about working with linked data.

Embedded Fields

Embedded fields can be expanded to display two or more fields pertaining to a separate but related resource. For example, information about Antibody Targets and Immunogenic Material are captured in embedded fields in Antibody records.

▶ **Antibody Target(s)**

▼ **Immunogenic Material**

Immunogenic material Name*

Immunogenic material Type* 
[Request](#)
[a term.](#)

Entrez Gene ID  

Entrez Gene Symbol  

Clicking on the field title will expand or collapse the rest of the embedded record.

Like fields that link to Genetic Alterations records, embedded fields are used by eagle-i search to return their referencing types.

Genetic alteration [BMP2 insertion](#)

A sequence variation that deviates from a canonical or reference sequence.

Related [Skeletal morphogenesis analysis](#)

Technique

Biological process studied [Limb development](#)

- [All Resource Types](#)
- [Biological Specimen](#) [add new](#)
- [Database](#) [add new](#)
- [Human Study](#) [add new](#)
- [Instrument](#) [add new](#)
- [Organism or Virus](#) [add new](#)
- [Protocol](#) [add new](#)
- [Reagent](#) [add new](#)
- [Research Opportunity](#) [add new](#)
- [Service](#) [add new](#)

[Duplicate](#) [Delete](#)

Genetic alteration Name* [BMP2 insertion](#)

Genetic alteration Type* [Insertion](#)

Genetic alteration Additional Name FLOX BMP2

Entrez Gene ID [12156](#)

Example: If a match is made on a gene in a Construct Insert, search returns the construct that references it.

However, whereas Genetic Alterations are reusable (e.g. the same allele can be referenced by two different mouse lines), embedded fields are not (e.g. each construct insert can be embedded in only one construct reagent record).

Institution Specific Annotations

This section will only display above the **Comments** if your institution has chosen to add any local fields. Fields in this sections will not be included in the [Annotation Guidelines](#) or visible in the [Ontology Browser](#), as they are not part of the central [eagle-i Ontology](#). Questions about annotations in this section should be directed to the local contact at that institution.

The 'Same As' Field

Equivalent resources in the Semantic Web. Please enter valid RDF URIs.

Same as

[↻](#) [+](#)

The **Same As** field displays on every form underneath **Comments** and **Curator Notes** fields. This field should ONLY be used to capture valid RDF URIs of equivalent resources in the Semantic Web. If you have any questions about what constitutes a valid RDF URI, please leave this field blank and consult with an eagle-i curator.

Editing Records

Records can be edited from any state. See the [Access Level Details](#) section for more information about which levels grant access to edit records in different states.

Note: You may only edit records that are not currently locked or being edited by another user.

Typical modifications include updating incorrect or outdated information, or adding new information. Edits made to published records are immediately visible in the search application. Published records should only be sent back to curation or draft status if the requested changes need to be made by someone with a lower access permission level, or if the current information is incorrect and should not be publicly displayed, but updated information is not yet available.

To edit a record:

1. Locate the resource.
2. Click **Edit**.
3. When you have finished modifying the record, click **Save** to save the changes and leave the record locked so only you can access it. Or if you want to allow someone else to edit the record, click **Save and unlock**.

If a record is closed without saving, any changes that were made will be lost. Therefore, if making numerous or complicated modifications, it may be a good idea to preemptively **Save** and **Edit** certain individual changes as they are made.

Locking and Unlocking Records

Locking places a hold on the record so that only the person who has locked it can edit it. Unlocking a record means it may be locked and edited by any user with [the appropriate permissions](#). You can change the ownership status of a single record by clicking the **Lock** or **Unlock** buttons from within that record or from within a list.

Note: ownership of a record via locking should not be confused with ownership of the actual resource.

The SWEET automatically locks records while they are being edited. This prevents two people from making changes to the same record at the same time. When you are finished editing, you can choose to either **Save** or **Save and unlock** the record:

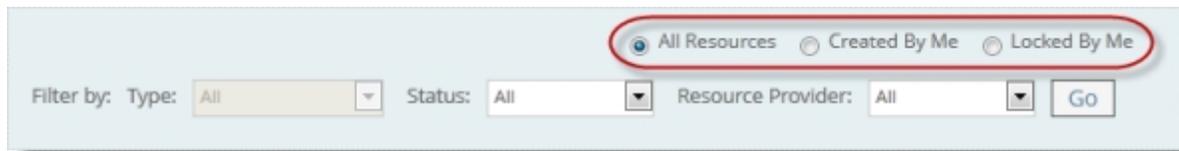


- **Save** will preserve the current edits but leave the record locked so that no other user can edit it.
- **Save and unlock** will save the current edits and automatically release the lock. A green icon of a lock and key displays in the upper right corner of the main body of any record you have locked, regardless of whether or not you are currently editing it.

In the list view, records locked by other users are represented with an orange icon of a lock in the far right column. Hovering over the icon will display the name of the user who has locked the record. Unlocked records or records locked by you display the following options instead of the lock icon: **Edit**, **Delete**, and **Lock**.



Users can also choose to manually lock records they are not currently working on, either to prevent other users from editing them, or to make it easy to filter a subset of records from a larger list. For example, suppose you are about to edit several related records, a process that may take you most of the day. By locking all of the records you ensure that each record will be available and unchanged when you are ready to make your changes. From any list, you can select **Locked by me** to display only the records you have currently locked.

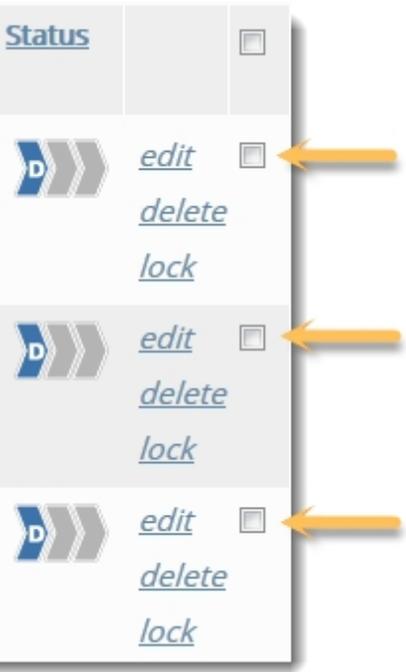


In most circumstances, however, it is best practice to leave any published, in curation, or withdrawn records you are not currently working on unlocked so that other users can edit them as needed.

Note: when the status of a record changes, it is automatically returned to an unlocked state and must be manually locked again in order to keep other users from making changes to it.

To Lock or Unlock multiple records:

1. From any list, click the check box next to one or more records.



2. From the Actions drop-down menu, select **Lock** or **Unlock**.

Service

< previous 1 - 20 next > 20

Resource Name Provider Name	Type	Date	Added	Edited	Actions
Access to confocal microscope Tissue Imaging Core-BICaRe	Access service	2012-03-13	<input checked="" type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Actions Publish Return to Curation Return to Draft from In Curation Return to Draft from Withdrawn Send to Curation Withdraw from In Curation Withdraw from Published Lock Unlock
Access to two-photon microscope Tissue Imaging Core-BICaRe	Access service	2012-03-13			lock
Bioassays Becky's Institute for Cancer Research	Analysis service	2012-03-16			
Confocal Training Tissue Imaging Core-BICaRe					<ul style="list-style-type: none"> edit <input checked="" type="checkbox"/> delete lock
FACSCalibur eagle-i training core 1	Service	2012-07-24	tjohnson		<ul style="list-style-type: none"> edit <input checked="" type="checkbox"/> delete lock

Click to lock a single record...

...or select several records and click **Lock** on the **Actions** menu.

3. A list of selected resources appears. Click **Confirm**.

Note: You can only lock a record that has not already been locked by someone else.

About Resource Stubs

Stub records are incomplete records that were created as links from within another record and contain two fields: name and type. Stub records you create are listed in the **View My Resource Stubs** section from the **Workbench** so they are easy to find and further annotate. Once they have been edited and saved, they will no longer appear in this section.

To create, view, and complete a single resource stub:

1. From a field that links to another record, select <create new>.

Contact <create new>  

A resource stub will be created. It can be completed after saving.

Person Name*

Person Type* 

2. Fill in the name and type fields.
3. Click **save**. A message at the top of the record instructs you to complete your resource stubs , which are now highlighted in red with a yellow icon next to them.

Form Actions:		Workflow Actions:	
Edit	Lock	Send to Curation	
Duplicate	Delete	Check Links to This	

⚠ Please complete resource stubs.

Organization Name*	Example Core Lab
Organization Type*	Core Laboratory
Organization Additional Name	ECL
Director	Doe, Joan, Ph.D. ⚠
Email	examplelab@cbmi.edu
Lab Delivery Address	555 Any Street Any Town, MA 0555
Phone Number	(555) 555-5555
Affiliation	Center for Neurologic Diseases ⚠
Secondary affiliation	Department of Neurology, Example University ⚠

- Click on the name of any resource stub to open the associated [draft](#) record. A message at the top of the record informs you that you are viewing a stub record and instructs you to complete and save the record.

Form Actions: Edit Delete

Workflow Actions: Unlock Send to Curation Check Links to This

⚠ This resource is a stub. Please complete and save.

Person Name* Doe, Joan, Ph.D.  

Person Type* [Person](#)

[▶ Metadata](#)

5. Click the **edit** button and add any additional information needed to complete the record, then save. The record is no longer considered a stub.

If you do not wish to complete a stub record immediately after completing it, the **Resource Stubs** section in the **Workbench** allows you easily find it again at a later date.

To view all of your Resource Stubs:

1. Open the Workbench.
2. Click **Resource Stubs** to open the list of resources requiring your review and or completion.

All Resources
 Created By Me
 Locked By Me

Filter by: Type:
 Status:
 Resource Provider:

My resource stubs

These resource stubs were created within another record and must be completed. Resource stubs will only appear here if locked by you and have not been edited and saved.

< previous 1 - 20 [next >](#)

Resource Name Provider Name	Type	Date <input checked="" type="radio"/> Added <input type="radio"/> Edited	Creator	Status	<input type="checkbox"/>
Center for Neurologic Diseases	Center	2013-02-22	tjohnson	 edit delete unlock	<input type="checkbox"/>
Department of Neurology, Example University	Academic Department	2013-02-22	tjohnson	 edit delete unlock	<input type="checkbox"/>
Doe, Joan, Ph.D.	Person	2013-02-22	tjohnson	 edit delete unlock	<input type="checkbox"/>

Note: Only unedited stub records that have been locked by you will appear in this list. Once you edit or unlock any of the records in the Resource Stubs section, they disappear from the list.

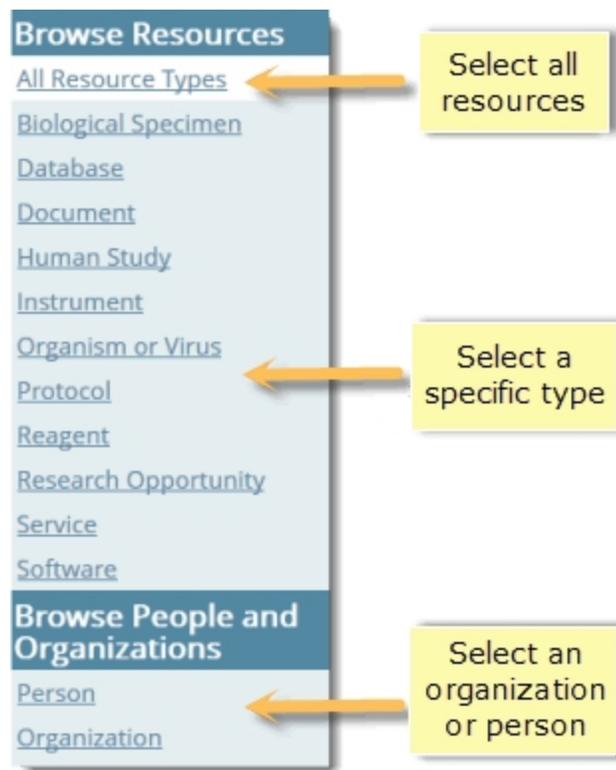
Navigating Lists

Records are organized and displayed in variety of lists in the SWEET. You can view lists of records only associated with a particular organization at your institution, or lists of records associated with *all* organizations at your institutions.

To display all people, organizations and resources for your institution:

1. From the [Workbench](#), click **Browse People & Resources in My Institution**.
2. To view a lists of resource records, select a specific resource type from the left navigation menu or click **All Resource Types** to display all resources owned by your institution.
3. To view a list of people are your institution, click **Person**.
4. To view a list of organizations affiliated with your institution, click **Organization**.

Note: Due to the large number of resources at some institutions, clicking **All Resource Types** may take slightly longer to display.



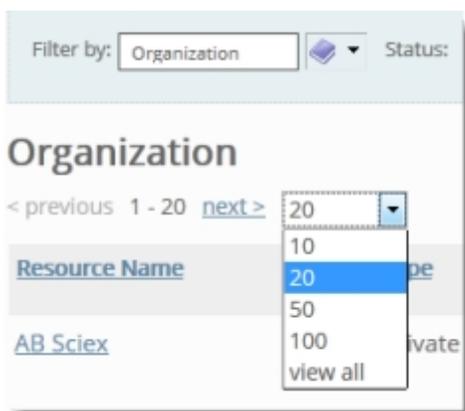
To display resources associated with a single organization:

1. Open an organization record.
2. Use the links in the left sidebar to open lists of different resources associated with that organization:



Changing the number of records displayed

The SWEET displays only the first 20 records of any list by default. You can choose to display 10, 50, 100, or all records in the list instead by selecting one of these options at the top left of every list.

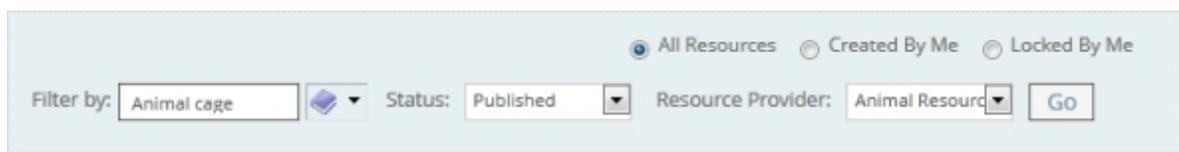


Note: selecting **view all** may result in longer load times for larger lists.

Use the **next** or **previous** links to navigate to the next or previous page of records in the list when not viewing all.

Filtering lists

All lists in the SWEET allow filtering based on one or more of the following categories:



- **Type** — Filters by the selected resource type. To further narrow your search, use the taxonomy browser. For each resource, browse through the taxonomy hierarchy then click to drill down to lower hierarchical levels.
- **Status** — Filters by [draft](#), [in curation](#), [published](#), and [withdrawn](#) records.
- **Organization** — Filters by resources or people owned by the organization selected.
- **Creator/Lock Owner** — Filters by records created or locked by the current user.

To apply a combination of filters for Type, Status, or Organization, select one or more and then click **Go**. Filters that are not available for the records listed are grayed out.

To view only resources in a particular list that you have locked, select **Locked By Me**. To view only resources in a list that you created, select **Created By Me**. In most lists of records, all resources are displayed by default. Select **All Resources** to return to the default view.

Sorting lists

All lists of records can be sorted by the following categories:

Resource Name	Type	Date	Creator	Status		<input type="checkbox"/>
Provider Name		<input checked="" type="radio"/> Added <input type="radio"/> Edited				

- **Resource Name** — The contents of the resource name field. Displayed in the same column as the provider name.
- **Provider Name** — The name of the owning organization for the resource. Displays in all lists of resources and people, in the same column as the resource name.
- **Type** — The contents of the resource type field, which is drawn from the ontology.
- **Date Added** — The date the record was created. Displayed in the same column as the date edited. To sort by this, select the radio button next to **Added** and click the **Date** link at the top of the column.
- **Date Edited** — The date the record was last saved. Displayed in the same column as the date added. To sort by this, select the radio button next to **Edited** and click the **Date** link at the top of the column.

Service

< previous 1 - 20 next > 20

Click the radio button to sort by either date first added or date last edited.

Resource Name	Type	Date	Creator	Status		<input type="checkbox"/>
Provider Name		<input checked="" type="radio"/> Added <input type="radio"/> Edited				
Access to confocal microscope Tissue Imaging Core-BICaRe	Access service	2012-03-13	rpearse		edit	<input type="checkbox"/>
					delete	
					lock	
Access to two-photon microscope Tissue Imaging Core-BICaRe	Access service	2012-03-13	rpearse		edit	<input type="checkbox"/>
					delete	
					lock	
Bioassays Becky's Institute for Cancer Research	Analysis service	2012-03-16	rnav		edit	<input type="checkbox"/>
					delete	
					lock	

- **Creator** — The name of the user who created the record.

Resource Name Provider Name	Type	Date	Creator	Status	
Access to confocal microscope Tissue Imaging Core-BICaRe	Access service	2012-03-13	rpearse		edit delete lock

- **Status** — Displays an icon corresponding to each record's [state](#): Draft, In Curation, Published or Withdrawn.

Service

< previous 1 - 20 next > 20

Actions

Resource Name Provider Name	Type	Date	Creator	Status	
Access to confocal microscope Tissue Imaging Core-BICaRe	Access service	2012-03-13	rpearse		edit delete lock
Access to two-photon microscope Tissue Imaging Core-BICaRe	Access service	2012-03-13	rpearse		edit delete lock
Bioassays Becky's Institute for Cancer Research	Analysis service	2012-03-16	rnav		edit delete lock
Confocal Training Tissue Imaging Core-BICaRe	Training service	2012-03-13	rpearse		edit delete unlock

Icons provide a quick visual cue of the record status.

Columns are sorted in ascending order by default. Click the column name again to sort in descending order instead.

Working With Linked Data

In eagle-i, it is possible to connect resources by creating links between records. This leverages the semantic power of linked data to help make search results more useful and guide users to resources they not otherwise have found. However, linking records also means that any changes made to one record may affect many other records in ways that may not always be obvious in the SWEET.

Example: Just as labs and resources may be published or sent to curation separately, changing the status of a lab record will not automatically affect the status of any of its associated resources. Therefore, before taking any of those actions, you should take care to make sure any records that are linked will not be negatively impacted. To help with this, when changing the state of a record, the system will prompt you to also perform the same action on any linked records that are currently in the same state.

Common issues that may occur with linked records include links to deleted or unpublished records, and the inadvertent creation of orphaned records.

- [Links to deleted records](#)
- [Links to orphaned records](#)
- [Links to unpublished records](#)

Performing actions on linked records

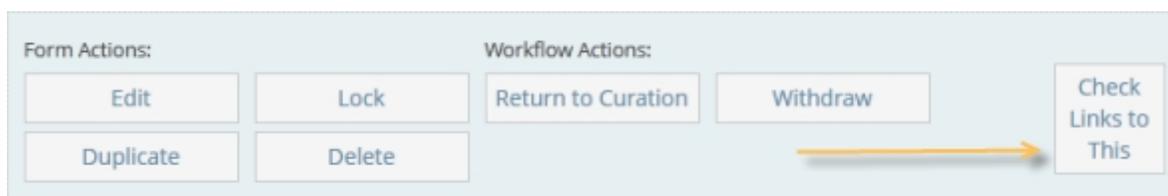
To avoid these types of linked data errors:

- Use the **Check Links to This** button located at the top of each record before deleting any record, regardless of publication status, or before removing any published record from visibility in the search application.
- Never publish a record without examining any linked records to make sure they are also complete and published. Commonly referenced types of resources to look out for are:
 - Owning organizations such as labs, centers, institutes, etc.
 - Contact people
 - Manufacturers and affiliates
 - Instruments, software, organisms and reagents that are related to services

If a previously published laboratory record needs to be removed from visibility in search for any reason, all associated resources should be manually redirected or removed at the same time.

To perform an operation on all resources associated to an organization:

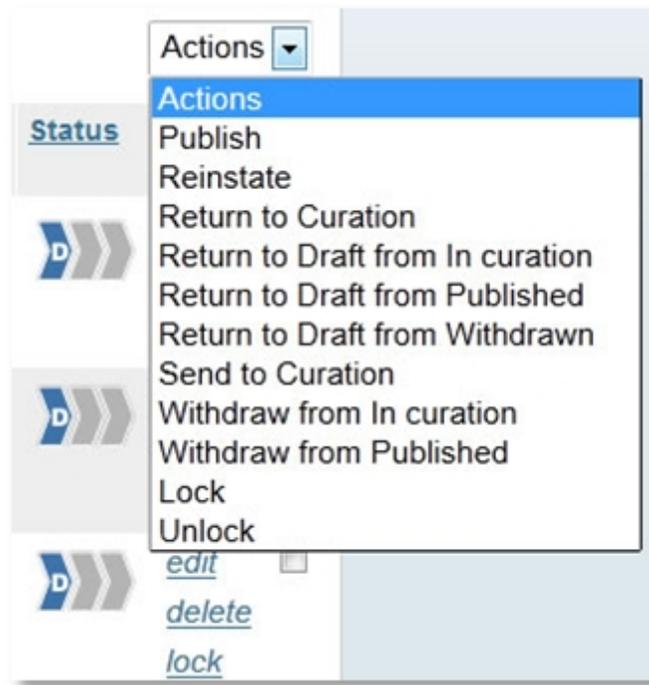
1. Select the **Check links to this** button from the laboratory record.



2. Use the check boxes on the right to select one or more resources.



3. Select an Action to apply to all. (There is no bulk delete. You must delete resources individually.)



Note: You will only see actions that you have permission to take. (e.g. Users with level 1 access will only see Send to Curation, Lock, and Unlock, while users with level 4 access will see many more options.)

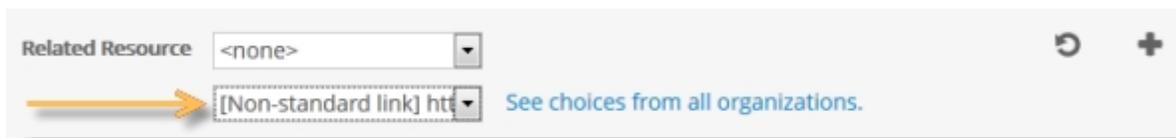
Links to Deleted Records

Fields populated by links to other eagle-i records that no longer exist in the repository will simply not display in the search application. In the SWEET, however, they will appear as the deleted record's URI. These are problematic because there is no way to identify the content of a deleted record from its URI alone, much less the context for how, why, when, or by whom it was deleted.

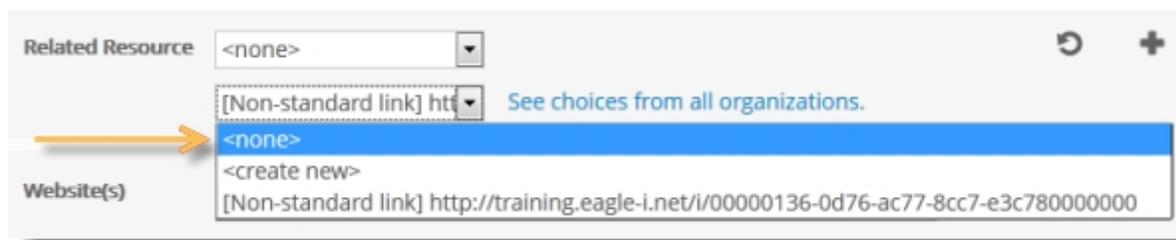
In addition, records are often removed because they duplicate other records; but once they have been deleted, there is no easy way to track the deleted links their removal might have created, meaning those connections may be unnecessarily lost. Therefore, best practice is to replace or remove all links before deleting a record, using the Check Links to This button at the top of every record.

To remove a deleted link:

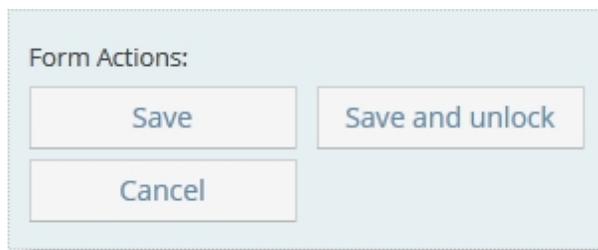
1. In edit mode, the field containing the broken link will display as **[Non-standard link]**.



2. Select any other record from the drop-down list or select **<none>** if this link simply needs to be removed.



3. **Save** or **Save and unlock** the record. The link to the deleted record should no longer display.



Note: If it is necessary to leave a link to a deleted record, you should leave a brief comment or explanation in the **Comments** field to avoid confusion in the future.

Links to Unpublished Records

Published records linking to unpublished records differ from links to deleted records in that they refer to records that still exist in the repository. But they behave like links to deleted records in the search application, meaning that those connections will not be visible to search users.

Links to unpublished records are hard to spot in the SWEET, as there is no way to tell simply from looking at a record what the status of all the records it links to is. However, when you change the status of a record, the system will ask if you also want to change the status of any linked records which are currently in the same state. For example, if you publish a record from curation and there is linked contact person for the lab also in curation, a pop up message will ask if you also want to publish the contact. Select Yes to change the state of the linked record(s). Select No to leave the linked record(s) in their existing state; the original record's state will still be changed even if you select No.

Note: This applies only to records directly referenced with a link on the record whose state is being changed. In other words, the pop up will not include all resources associated with an organization if they are not directly linked from a field in the organization record

Orphaned Records

In some cases, it may be necessary to publish a record without publishing all of the records associated with it. But you should **never** publish a resource without publishing its owning organization and contact person. This creates an orphaned record in the search application, as location and contact information will be invisible to search user.

If an owning organization record needs to be removed from search either by being deleted, withdrawn, or returned to curation, all attached resources should be dealt with similarly—unless they are shared by another organization. For instance, if a person is the director of multiple labs, their person record should remain published even if one of the labs is withdrawn. If the person is attached only to the lab being removed, their person record should be removed as well. **No resource record should ever be published unless it is attached to a published organization.**

Note: If a non-owning organization record that is not ready to be published is linked from another record, then you should use your best judgment on whether or not to publish any linking records. It may be preferable to publish a record that is incomplete because of an unpublished link than to leave it unpublished.

Merging Records

Merging records is currently a manual process. You may find it necessary to merge records for a variety of reasons (e.g. in the course of cleaning up duplicate records, or if a data collector has created individual records for multiple copies of the same instrument model within the same lab).

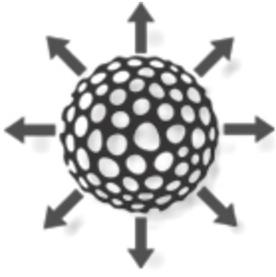
To determine which records should be kept and which should be deleted:

1. In general, already published records should be kept over unpublished records.
2. If none of the records have been published (or if all have been published), use the **Check links to this** button to determine which record has the least amount of links to be replaced. The one linked the most should be kept.
3. All other factors being equal, keep the record that contains the most information.

Note: These types of erroneous duplicates should not be confused with records created using the Duplicate button. This button is intended to aid in the creation of multiple records for resources which are separate but have similar properties.

If the records being deleted contain any information that is missing from the record being kept, that data must be manually migrated (i.e. copied and pasted into the appropriate field in the record being kept) before continuing.

Any links to the records being deleted must also be replaced prior to deletion. Use **Check Links to This** to determine if and where the record is linked on other records so that those links can be removed or replaced, as applicable. See the [Working With Linked Data](#) section for more detail.



Centrally Curated Resources

Centrally Curated Resources, sometimes also known as **Commonly Used** or **Global** records, represent resources that can be linked to from multiple institutions. For example, centrally curated records may exist for many private companies and government agencies, as these organizations will be referenced as manufacturers or funding agencies for many resources across all institutions in the eagle-i Network. These records are added and maintained by the central eagle-i team, and then shared among all institutions in the Network.

Linking to Centrally Curated Resources

If any shared records are available in a drop-down list, they will be listed at the top of the list under the header: **Commonly Used Resources**.

Instrument	<create new>
Additional Name	Commonly Used Resources
	A.E. Thorsen & Sons Manufacturing <Private Company>
	A.M. Bickford Inc. <Private Company>
Location	AB Sciex <Private Company>
	Abaxis <Private Company>
	Abcam plc <Private Company>
	AbD Serotec <Private Company>
Contact	ABM, Inc. <Private Company>
	Abnova Corporation <Private Company>
	Accelrys, Inc. <Private Company>
	Accurate Chemical & Scientific Corporation <Private Company>
Related Technique	AccuScan Instruments, Inc. <Private Company>
	ADInstruments <Private Company>
	Adobe Systems Incorporated <Private Company>
	Advanced Analytical Technologies, Inc. <Private Company>
	Advanced Chemistry Development, Inc. <Private Company>
Access Restriction(s)	Advanced Realtime Tracking GmbH <Private Company>
	Advanced Transport Refrigeration & Air Conditioning <Private Company>
	Advion BioSciences, Inc. <Private Company>
	AEI Technologies, Inc. <Private Company>
Manufacturer	Affymetrix, Inc. <Private Company>
	Agfa-Gevaert Group <Private Company>
	Agilent Technologies <Private Company>
	<none>

To link a local resource, such as an instrument or piece of software, to a centrally curated manufacturer, select the manufacturer name from the list of commonly used resources, and save the instrument or software record.

Adding and Editing Centrally Curated Records

New centrally curated records are added by the central eagle-i curation team. If the private company or government agency needed does not currently exist on the commonly used resource list, simply add a local record using **<create new>** as you normally would. Locally created records representing commonly used resources may be periodically migrated to centrally curated records by the central team.

This process should be invisible to local users, though you will not be able to [edit](#) or make changes to the [status](#) of any centrally curated records. To suggest an update to a centrally curated record, please contact the central curation team using the [Feedback form](#).

Extract, Transform and Load (ETL)

ETL (Extract, Transform and Load) is a process that can be used to bulk upload data into the SWEET. Experienced users can use the eagle-i SWIFT (Semantic Web Ingest from Tables) toolkit to ETL data into any eagle-i repository. Currently the toolkit supports only spreadsheets as input files, and due to the time needed to format files for ETL, it should typically be reserved for large or complicated data sets that would be too time-consuming to enter manually.

For more information about how to use SWIFT, please refer to [the technical documentation](#).

Data Entry and Annotation Workflow

This sections contains the entire eagle-i workflow from start to finish. You may not be responsible for some of these steps, but understanding the workflow as a whole may help you better understand your role in eagle-i at your institution. Watch this [video tutorial](#) for a demonstration of SWEET workflow.

Records in the SWEET progress through a life cycle where each stage is defined by a status, or state. There are four states in a typical record lifecycle:



[Draft](#) — New resources are created as drafts, and remain in a Draft state until they are complete. Draft records are not visible in the search tool.



[In Curation](#) — Records In Curation are ready for review to make sure they meet eagle-i guidelines prior to making them visible in search.



[Published](#) — Published records have been curated and are visible in the search application.



[Withdrawn](#) — Retired records which are not visible in the search tool, but are still kept in the repository for archival purposes.

Record [may also be deleted](#) entirely from the eagle-i repository. However, as this is a permanent action, it should be used only with caution.

An icon indicating its status displays in the upper right corner of every record. A legend for the icons is available under the left sidebar. Not all users have the ability to modify records in all states. Your access permission level is set by a system administrator, and will allow you to pass records through all or part of the typical record lifecycle as needed for your role at your institution.

Access Level Details

All users with access to the SWEET are able to create, edit, share or delete records while they are in draft form. However, higher permission levels will have access to records in curation or records that have been published or withdrawn. The different levels of access are summarized below, and are granted by a system administrator to suit your role at your institution:

	Level 1	Level 2	Level 3	Level 4
View records in any state	Yes	Yes	Yes	Yes
Create Draft records	Yes	Yes	Yes	Yes
Edit and delete Draft records	Yes	Yes	Yes	Yes
Send records to In Curation	Yes	Yes	Yes	Yes

Edit and Delete records In Curation	No	Yes	Yes	Yes
Return records from Curation to Draft	No	Yes	Yes	Yes
Publish records	No	No	Yes	Yes
Edit Published records	No	No	Yes	Yes
Delete Published records	No	No	No	Yes
Return Published record to Curation	No	No	Yes	Yes
Withdraw from In Curation	No	No	No	Yes
Withdraw from Published	No	No	Yes	Yes
Delete Withdrawn records	No	No	No	Yes
Reinstate from Withdrawn to Draft	No	No	Yes	Yes

Step 1: Creating Records in Draft

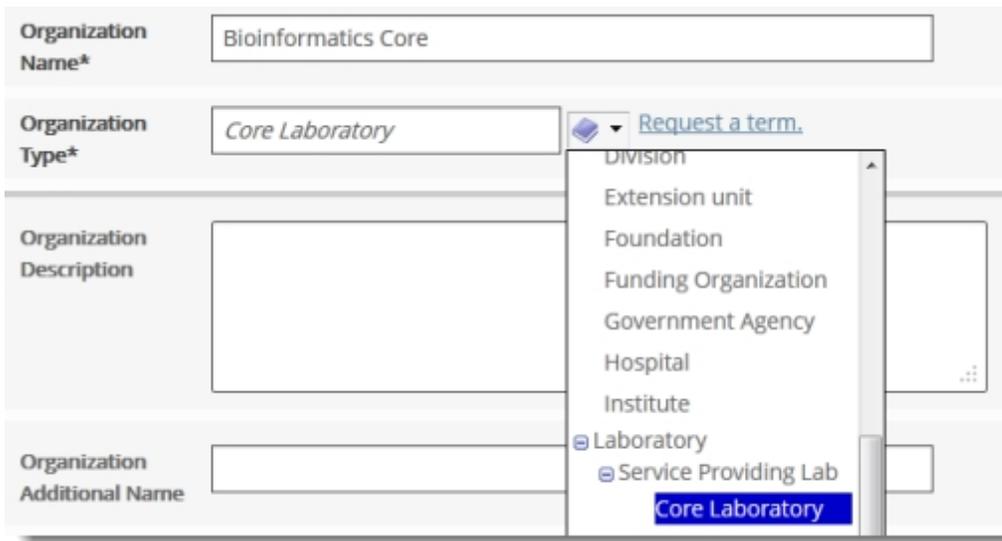
Every resource and most people in eagle-i must be associated with a providing organization. This means that before you can add resources, you must first add an organization record for the resource provider.

To add an organization:

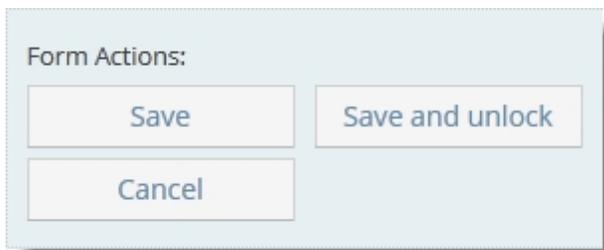
1. Open the SWEET, and click **Create an Organization** to open a blank record form.



2. Annotate the **Organization Name** and **Organization Type** required fields. The other fields displayed vary depending on the type of organization chosen. Add as much additional information as possible in the remaining fields. For detailed descriptions of every field, see the [SWEET General Annotation Guide](#).



3. **Save** or **Save and Unlock** the record when finished. After saving the record, unless the organization type is a private company, the left sidebar will populate with links allowing you to add additional resources to the organization.



Form Actions:

Save	Save and unlock
Cancel	

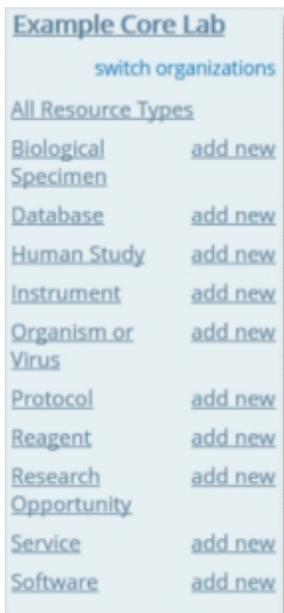
If you created any stub records for people or affiliated organizations, you should open them and add as much information as possible for each. [Stub records](#) cannot be sent to curation until they have been edited and saved at least once. After the stub records have been annotated, save the changes and return to the original organization record you just created.

Tip: To open stub records without leaving the record you are currently viewing, right-click on the name of the stub and open it in a new tab or window.

Next: Add resources

To add new resources:

1. Resource types are listed in the sidebar of every organization record. Click **add new** to open a new record form for that type. Forms are ontology driven, meaning each form will be slightly different.



Example Core Lab	
switch organizations	
All Resource Types	
Biological Specimen	add new
Database	add new
Human Study	add new
Instrument	add new
Organism or Virus	add new
Protocol	add new
Reagent	add new
Research Opportunity	add new
Service	add new
Software	add new

- Alternatively, you may wish to [duplicate](#) an existing record.
- Complete all the required fields in red. Hover over the field names in the SWEET to see a brief explanation (“tool tip”) of every field.

- Complete any additional fields. See the [SWEET General Annotation Guide](#) for each individual resource type for more information about each field.

- Click **Save**. This saves the resource as a record in the repository. The record is automatically assigned **Draft** status. If the resource links to unfinished resources, you'll need to complete these resource **Stubs** prior to sending the resource to curation.

After you save the resource you can **Unlock** the record if you want other users at your institution to edit this resource.

Optional Step: Duplicating Records

If you are entering multiple resources with similar properties, it may save time to use the duplicate button to create multiple copies of a single record. When you duplicate a record, this copies all editable fields in the original resource except for the name field. You can then modify or add information to make it specific to the new resource.

Note: You do not need to be the owner of a resource to duplicate it.

To duplicate a resource record:

1. Open a list of records for an organization by selecting either **All Resource Types** or a specific Resource Type link on the left sidebar.



2. Locate the record you wish to duplicate from the list. You can duplicate only one record at a time. Click the resource's name to open the record.

All Resource Types

< previous 1 - 20 next > 20 ▾

Resource Name	Type	Date
Provider Name		Added
Example Confocal Microscope	Confocal microscope	2012-04-
Example Core Lab		
Example Human Study	Clinical trial	2012-04-
Example Core Lab		
Test gene knockdown reagent	Reagent	2012-04-
Example Core Lab		

3. From the **Form Actions** menu, click **Duplicate**. A copy of the resource appears.

Form Actions: Edit, Duplicate, Lock, Delete

Workflow Actions: Return to Curation, Withdraw, Check Links to This

Instrument Name*: 633 nm: Helium-Neon laser, 15mW

Instrument Type*: Helium neon ion laser

Instrument Description: Part of Zeiss Axioplan 2 micro

Location: Cellular Imaging Core (CHB)

Related Technique: Imaging technique, Microscopy

Manufacturer: Carl Zeiss, Inc.

Related Software: Zeiss LSM Image Browser

Form Actions: Save, Save and unlock, Cancel

Instrument Name*

Instrument Type*: Helium neon ion laser

Instrument Description: Part of Zeiss Axioplan 2 microscope (upright) workstation; oil, 1.3NA.

Instrument Additional Name

Location: Cellular Imaging Core () [Change organization.](#)

Contact: <none>

Related Technique: Imaging technique, Microscopy

Access Restriction(s)

Manufacturer: Organization, Carl Zeiss, Inc. <Private>

Duplicating a record will create a nearly identical copy, but you must fill in a new name.

If you are duplicating a resource that belongs to another organization, you can change the location to your own organization before saving the record for the first time.

4. If the resource being duplicated belongs to a different organization from you're own, click **Change organization** next to the **Location** field and change the location to your own organization.
5. You must enter a new Name for the duplicate resource. Make necessary edits and then **Save** or **Save and unlock** the record.

Instrument Name*

You can duplicate resources owned by other organizations as well as resources owned by your own. Once you have duplicated the record, Click Change Organization to change the organization associated with the duplicated resource. Select the new organization. Then, click **Save**.



Step 2: Sending Records to Curation

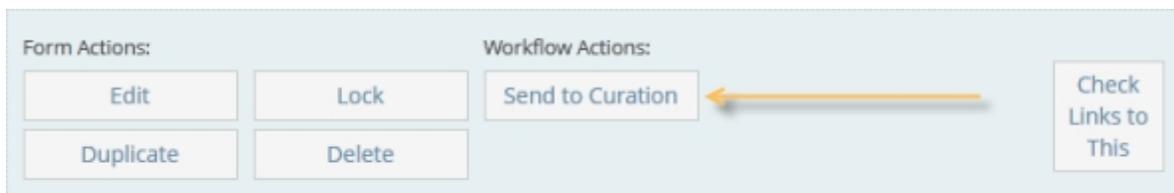
After a record has been created and annotated as completely as possible, the next step in the workflow is to send it to curation. All users have the ability to send records from draft to curation. If your role does not grant you access to edit and publish records in curation, then another user will review the records you send to curation. During the curation process, curators review the data and make any necessary annotations prior to publishing.

Note: When you send an organization to curation, you are only sending the organization record, not all of the resources associated with it. While it is possible to send records to curation piecemeal, it is recommended that you send as many connected records to curation together as possible in order to facilitate timely curation. Resources sent to curation without an owning organization or associated contact email will not be published.

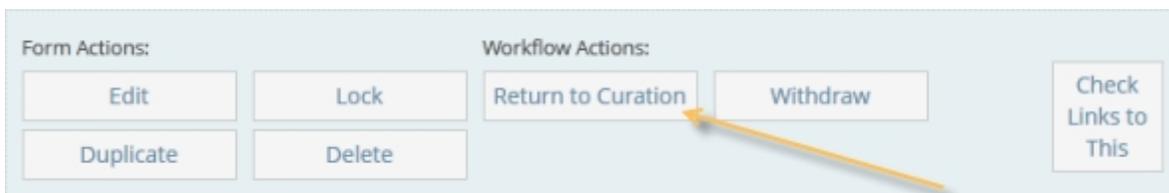
To send a single record to Curation:

Open a single record.

1. If the record is a draft, click Send to Curation.



2. If the record is currently published, click Return to Curation.



To send multiple records to Curation:

1. Open a list of records belonging to an organization by selecting either All Resource Types or a specific Resource Type link on the left sidebar.

Example Core Lab

[switch organizations](#)

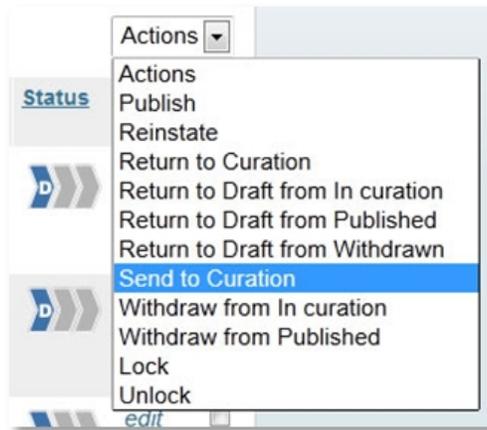
All Resource Types

Biological Specimen	add new
Database	add new
Human Study	add new
Instrument	add new
Organism or Virus	add new
Protocol	add new
Reagent	add new
Research Opportunity	add new
Service	add new
Software	add new

2. In the resource list, select the checkbox beside all the records that should be sent to curation.

<u>Status</u>		<input type="checkbox"/>
	edit delete lock	<input type="checkbox"/>
	edit delete lock	<input type="checkbox"/>
	edit delete lock	<input type="checkbox"/>

3. From the Actions drop-down menu, select **Send To Curation** or **Return to Curation**, depending on record status.



Send to Curation will only send records in Draft state to curation, even if Published records are also selected. Similarly, **Return to Curation** will only send Published records to curation, even if Draft records are also selected. If a [stub record](#) is among the resources selected sending multiple records to curation, you see the error: *Please finish reviewing <resource name> before trying to Send to Curation.*



Step 3: Reviewing and Publishing Records

All eagle-i records must be checked for consistency and accuracy before being published in the repository. Data curators provide this data quality assurance by reviewing resources sent to curation and ensuring they conform to the annotation guidelines. If more information is required, they may return the records to draft so the record creator can edit it; if the records are complete, they are published and made visible in the eagle-i search application. Data curators also provide data management support by keeping resource information current.

Note: there is no automated process for notifying curators when new records have been submitted for curation. You will need to set up your own systems of communication with resource collectors, monitor the SWEET, and/or run regular data queries to see records in Curation at your institution.

Reviewing by Organization

Because eagle-i resources are organized and displayed by their providing organization, it is generally helpful to review them within that context. Reviewing all of the resources from one organization before moving on to another organization's resources allows you to check for internal consistency, weed out accidental duplicates that might have been entered, and consolidate records where necessary.

Typically, records that should be combined are:

- Sparsely annotated service records that describe variations on the same service. For search usability, it is better to combine these under a single service record with a broad title and list the individual service variations in the resource description.

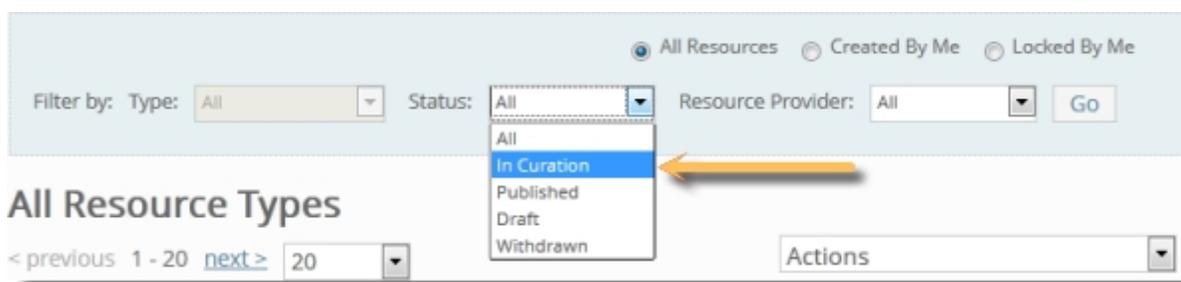
- Multiple copies of the same instrument owned by the same lab. These should be described in one record. Note how many of that instrument is available in the resource description.

To review records by organization:

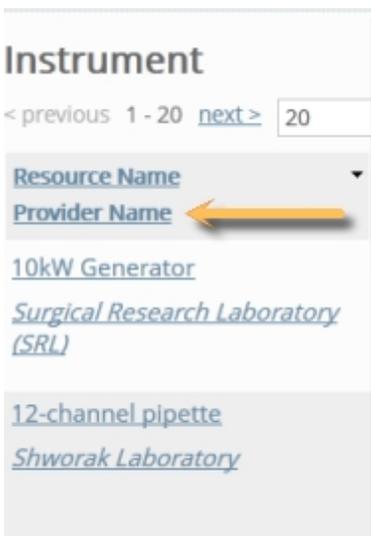
1. From the Workbench click Browse People & Resources in My Institution.



2. Filter the list by status. Select In Curation from the Status drop-down filter list.



3. The name of the owning organization is displayed in italics underneath each resource name in the list. All resources at your institution are displayed in alphabetical order by default. You can sort by Provider Name to see resources belonging to the same organization grouped together.



4. Or simply click on a resource to open the record, then use the left sidebar—now populated with information specific to the provider for that resource—to navigate through other resources within that organization.

The screenshot shows a web interface titled "Example Core Lab" with a "switch organizations" link. Below is a section "All Resource Types" containing a list of resource categories, each with an "add new" link:

Resource Type	Action
Biological Specimen	add new
Database	add new
Human Study	add new
Instrument	add new
Organism or Virus	add new
Protocol	add new
Reagent	add new
Research Opportunity	add new
Service	add new
Software	add new

5. Because required fields are different depending on the resource type, you should start by reviewing the resource **Name** and **Type** fields.

For more information, see the [Data validation and consistency](#) and [How to publish records](#) sections.

Data Validation and Annotation Consistency

Curation is more than just proofreading.

You should ensure that the data is as robust and complete as possible before publishing it. When curating a laboratory or another type of resource owning organization, it is best practice to compare the information in the SWEET with information available on the organization's website. If there is information on the site that is missing from the records, it should be updated in eagle-i, unless there is reason to believe the website is out of date. Manufacturers' sites can also be a good source of information for instruments, software, reagents, and protocols. Any questions should be brought to the attention of the record creator.

See the [SWEET General Annotation Guide](#) for specific guidelines pertaining to each resource type.

Data Validation

When reviewing records, check to ensure:

- All required fields are complete. Note that required fields vary depending on type.
- Additional fields are complete whenever information is available.
- Data is recorded in the correct field: for example, the study's CT.gov URL is in the ClinicalTrials.gov URL field, not the website (s) field.

- Data is contextually accurate: For example, would a user be surprised if they searched for the contents of any of the record's properties and got the record as a result?
- Was there a term request associated with this record? If so, does the request represent a truly unique concept, or should the record have been annotated with another existing term?
- Data is contextually consistent. In other words, the metadata from the ontology is applied consistently with that of similar records.
- Links between the record and other resource records are correct, and the records to which your resource links are all also published.

Annotation Consistency

The wide range of annotation and domain expertise among the individual data collectors means that incoming data may be wildly inconsistent. You are responsible for maintaining not only a certain standard of quality in the data, but also for ensuring that the data is described in a similar manner within each institutional repository as well as across the entire network.

There are several general methods for maintaining annotation consistency. In addition to referencing the topics in these guidelines, it is best practice to:

- Use the eagle-i search application to review how other similar records have been annotated.
- Perform periodic automated (SPARQL queries) and manual data quality spot checks to ensure uniformity and correct human error in the data.
- Reach out to other curators. Curation is collaborative by nature. Curators are strongly encouraged to communicate with one another and with other domain experts over any questions relating to consistency and overall data quality.

Publishing Records

Once you have completed your review, publish the record along with any associated records that have also passed through curation.

Things to look out for:

- All published eagle-i resources must be linked to a published organization. Although the system allows records for organizations to be submitted for curation independently from other resources associated with them, they should not be published unless they are referenced by another published record as a resource provider, affiliate, or manufacturer.
- Core laboratories should not be published unless they are associated with at least one published service record.
- Every published resource-owning organization needs at least one associated email address in order for the Send Message to Resource Contact button to function correctly in search. An email address can be associated with an organization by entering the an email address in the Email field on either the organization record itself, or in a published contact, PI, or Director person record related to that organization.

For more information see [Working With Linked Data](#).

Publishing records with open term requests

If there is an outstanding term request for a record that is otherwise complete, it should be published. See [Publishing Records with Open Term Requests](#) for more details.

To publish multiple resources at the same time:

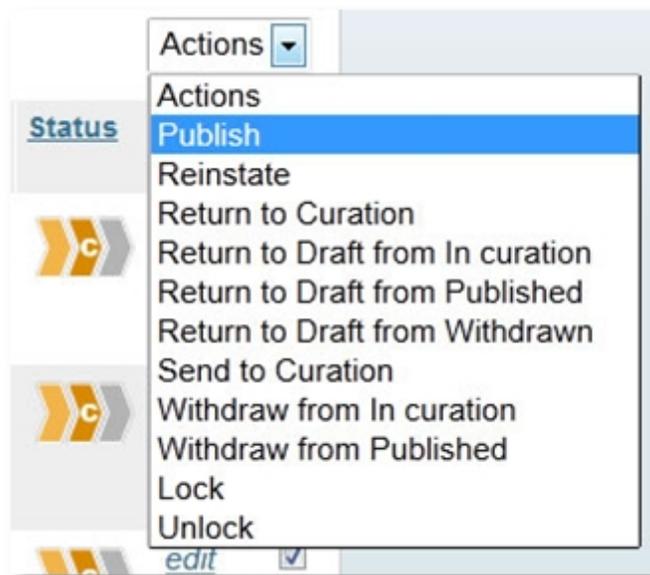
1. From the Workbench, click Browse People & Resources in My Institution.

[Browse People & Resources in My Institution](#)

2. Filter the list to view the records that are currently in curation. Select one or more resources by clicking the check box.



3. Click Publish in the Actions menu.



Step 4: Withdrawing Records

When a record is withdrawn, the data is retained in the repository but is not visible in search. Withdrawn records can still be viewed, edited, and locked. They can also be returned to draft in order to start the process through the lifecycle again.

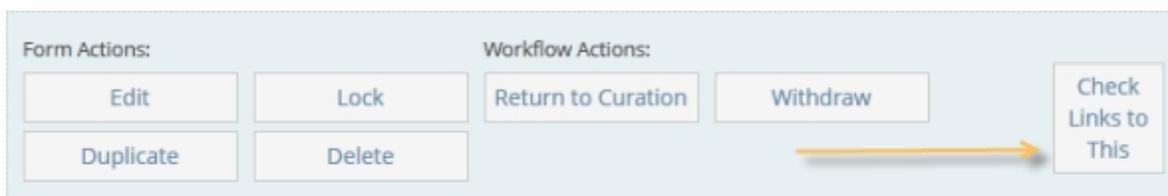
You should withdraw any published records that are no longer relevant but should still be kept for archival purposes. For example, you may need to withdraw the record due to privacy issues, or a laboratory may want to temporarily remove the record from public view, but plans to reinstate it at a later time. Another reason may be that the record has been combined with other records but the original data needs to be saved. In general, previously published records should always be withdrawn rather than deleted, unless they are duplicates of other existing records.

Some users also have the ability to withdraw records from curation. This access is restricted because typically, only records which have been published should be withdrawn and kept in the system. In certain, rare circumstances, however, it may be necessary to keep a record or collection of records for reference which will never be published for various reasons.

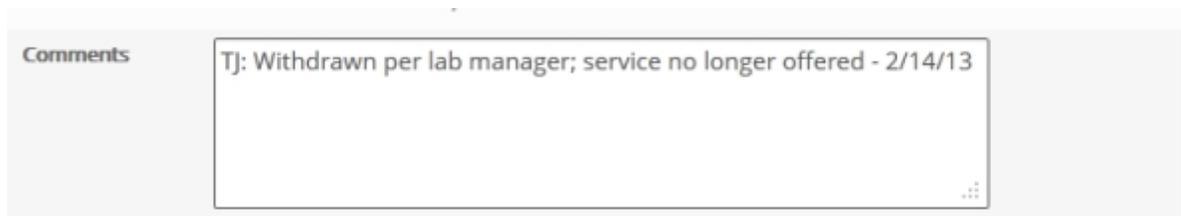
Note: Withdrawn records will not be listed in fields that link to other records unless they were already linked in that field prior to being withdrawn.

To withdraw a record:

1. Open the record and select the Check links to this button. Check if it is linked to any other resources and then determine if those records should be withdrawn as well. If you are withdrawing a laboratory, all of the attached resources and people must also be withdrawn.



2. Add a note in the Comments field with your initials, explaining why the record was withdrawn.



3. From the Workflow Action menu, click Withdraw.



Next step: [Reinstate the record](#).

Optional Step: Reinstating Records

Records that have been withdrawn can be reinstated back to active status at any time.

To reinstate a withdrawn record:

1. Select Return to Draft from the Workflow Actions.
2. Update the record as needed.
3. Move the record back up through [the workflow](#) until it is published again.

Note: resources associated with withdrawn organizations should only be reinstated along with their owning organization. See [Working With Linked Data](#) for more information.

Deleting Records

Records may be deleted from the eagle-i repository entirely, rather than Withdrawn. The distinction between withdrawn records and deleted records is that once deleted, a record cannot be recovered. Therefore, you should use caution before deleting any

record. In general, the only records that should be deleted are unpublished, erroneously created, or unnecessary duplicate records. In the case of duplicates, the records should be [merged](#) and the duplicate deleted.

To delete a resource record:

1. Open a list of records belonging to an organization by selecting either All Resource Types or a specific Resource Type link on the left sidebar.



2. Locate the record to delete from the list. You can delete only one record at a time.



3. Click the resource's name to open the resource details page and use the [Check Links to This](#) button to determine if the resource is linked to any other records.

Workbench > [Example Confocal Microscope](#) > Links To

All Resources
 Created By Me
 Locked By Me

Filter by: Type: Status: Resource Provider:

Resources that link to Example Confocal Microscope

Consider these links when sending to curation, publishing, withdrawing or deleting the resource. See help documentation for more information about referential integrity.

< previous 1 - 20 [next](#) >

Resource Name Provider Name	Type	Date	Creator	Status	
Example Service Example Core Lab	Service	2013-05-02	tjohnson		<input type="checkbox"/> edit delete lock

4. Edit those records. Remove or replace those links as necessary.

Related Resource

See choices from all organizations.

Website(s)

- <none>
- <create new>
- This Organization's Resources*
- Example Confocal Microscope <Laser scanning confocal microscope>, Example Core Lab

5. Return to the record you wish to delete. Click Delete in the Form Actions panel.

Form Actions:

Workflow Actions:

Instrument Name* Example Confocal Microscope

Instrument Type* [Laser scanning confocal microscope](#)

Location [Example Core Lab](#)

Data Maintenance and Quality Control

Periodic quality control measures need to be taken to ensure the data in the repository stays up to date and accurate, and that connections between records are linked correctly. Data maintenance and quality control activities consist of: refreshing stale information, removing invalid records, updating records to meet any changes to the guidelines or ontology, and ensuring that the necessary connections are visible in the search application. In general, each institution is responsible for maintaining its own data; the central curation and ontology teams may also perform these activities to ensure consistency across all institutions and to update terms or records after an ontology or software release.

There are a number of SPARQL queries that need to be regularly and manually run to perform large-scale quality assurance on the data at all institutions. The table below lists the broad types of queries and the frequency with which they should be run:

DAILY

- Check for records in curation that need to be reviewed

WEEKLY

- Check for Orphaned records:
 - Published resources with an unpublished provider.
 - Published resources that have links to other unpublished records.
- Check that all published resource have published contact information, either in the contact associated with the resource or with the resource's owning organization

MONTHLY

- Check for broken links to external websites.
- Check for records that have same label as type.

POST-RELEASE

- Check for new term requests that have been added to the ontology and now need to be updated in the SWEET.

PERIODICALLY

- Check for resource with multiple providers. These may be deliberate but should be verified.
- Check for resources with obsolete types or properties.
- Check for records with no label. These will not be visible in the SWEET and require build team assistance to fix. These are usually the result of an ETL error or data migration error.

Privacy Concerns

eagle-i currently hides information related to physical addresses, e-mail addresses and phone numbers of all organizations and people, in response to the privacy concerns of certain researchers (in particular, research laboratories that work with animals).

The affected fields are:

- E-mail
- Lab delivery address
- Mailing address
- Phone number

Although this information can and should be entered in the data tool, it will not display in the search application. eagle-i Search features an anonymous contact button that allows users to email resource owners while protecting their privacy.

LAI Automated Comet Assay Analysis System (LACAAS) System

Comet assay analysis system ⓘ

Instrument
Description

"The LAI Automated Comet Assay Analysis System (LACAAS) is a modular system of hardware and software that offers all the features and components needed for efficient collection and rapid automated analysis of large sets of fluorescent single cell comet images, as required for effective and accurate Comet Assay evaluation. The Comet Assay, also known as the Single Cell Gel Electrophoresis Assay, permits quantitative assessment of the effects of DNA damaging or apoptosis inducing agents and mechanisms in a wide variety of important target cell types. The assay also has great utility in studies of DNA repair."



Jackson State
University

Related Resources

Protocols

[Comet assay protocol](#)

Services

[Instrumentation access service](#)

Contact Information



[Send Message to Resource Contact](#)

Click to send a message to the owner of this resource.

De-identifying Lab Names

Organizations that wish to anonymously contribute information about their resources to eagle-i can use a less specific name if using their real name would be enough to identify them.

For example: a research laboratory working with primates goes by the name "Smith Lab." As the lab wishes to remain anonymous, it could be entered into eagle-i with a more generic name, such as "Primate Research Laboratory".

Email and Contacts

Instead of creating contact people for these organizations, the email of the designated contact should be used in the Email field on the organization record, along with a comment explaining the

In some cases, laboratories may also request that existing person records be removed from search to keep even their names from displaying. Those person records should be [withdrawn](#) with an explanation added in the **Comments** field. If the removed person's email was the sole contact email for that organization, either:

1. Add a generic organization email to the organization record.

- or -

2. Migrate the personal email address of the withdrawn person to the owning organization email field. Because eagle-i uses an anonymous contact form in the search application, the actual email address will remain hidden, but users will still be able to contact the person.

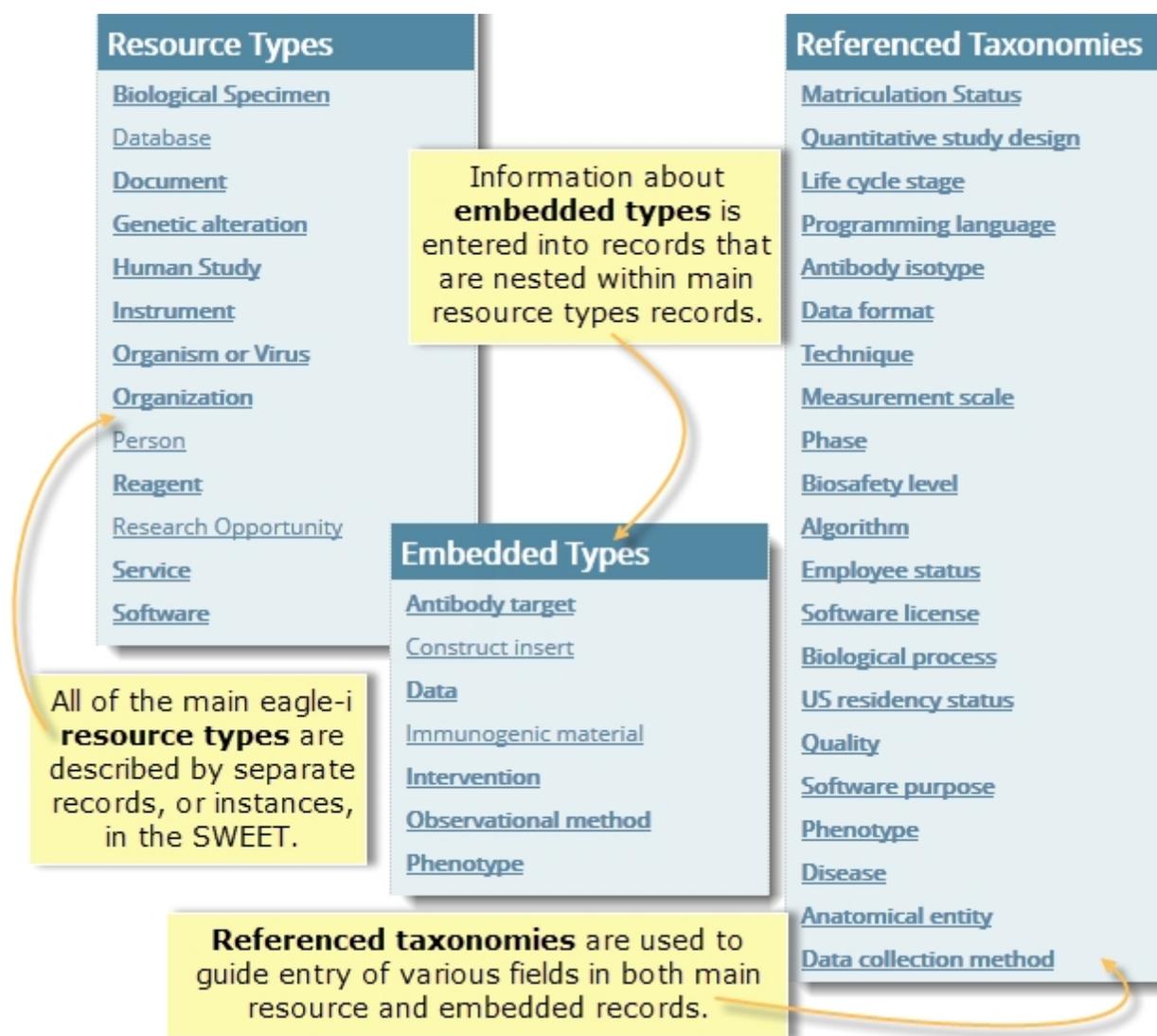
Using the eagle-i Ontology

The eagle-i ontology is maintained by a central team, and drives much of the way information is displayed and annotated in the SWEET. The ontology can aid in both annotation and curation.

- [Navigating the eagle-i ontology](#)
- [Adding terms to the eagle-i ontology](#)

Using the eagle-i Ontology Browser

The [Ontology Browser](#) allows you to look for terms and view definitions, synonyms, related terms, and the properties used to describe them in the SWEET. This information can be used to determine the most appropriate terms to use for annotation.



Requests for new terms can be entered by filling out a simple form available in either the SWEET or the [ERO Term Tracker](#). See the [Submitting a Term Request](#) section for more detail.

Searching and browsing the ontology

From either the SWEET or the search application, click Help and select the Ontology Browser, or go to <https://search.eagle-i.net:8443/model/>.

To find vocabulary terms:

- Browse the term hierarchy in the left sidebar by major resource type. For example: browse instruments, reagents or by the various taxonomies referenced by the eagle-i ontology, such as **Techniques** or **Biological Processes**.
- Click any term to display its information in the main body of the page and its *child terms* (sub-classes) in the sidebar. The selected term appears in the sidebar under a hierarchy of its parent terms (super-classes).

The screenshot shows the ontology browser interface for the term "Stereo microscope". On the left is a sidebar with a hierarchy of terms: "Stereo microscope" (bold), "Inverted stereo microscope" (plain), "Antibody Target" (bold), "Construct insert" (bold), "Data" (bold), "Immunogenic material" (bold), "Intervention" (bold), "Observational method" (bold), "Phenotype" (bold), "Matriculation Status" (bold), "Quantitative study design" (bold), "Life cycle stage" (bold), "Programming language" (bold), and "Antibody isotype" (bold). The main content area displays details for "Stereo microscope":

- Is a:** [Instrument](#), [Microscope](#), [Optical microscope](#)
- Synonyms:** *dissecting microscope, dissection microscope, Macro microscope*
- Definition:** An optical microscope that uses two separate optical paths with two objectives and two eyepieces to provide slightly different viewing angles to the left and right eyes.
- Properties:** * indicates a required property
 - [Access Restriction\(s\)](#) string
 - [Additional Name](#) string
 - [Contact](#) [Person](#)
 - [Developed by](#) [Organization](#) [Person](#)
 - [Exchange facilitator](#) string
 - [Inventory Number](#) string
 - [Location](#) [Organization](#)
 - [Manufacturer](#) [Organization](#) [Person](#)
 - [Model Number](#) string
 - [Related grant number](#) string
 - [Related Publication or Documentation](#) [Document](#)
 - [Related Software](#) [Software](#)
 - [Related Technique](#) [Technique](#)
 - [Resource Description](#) string
 - [Website\(s\)](#) string

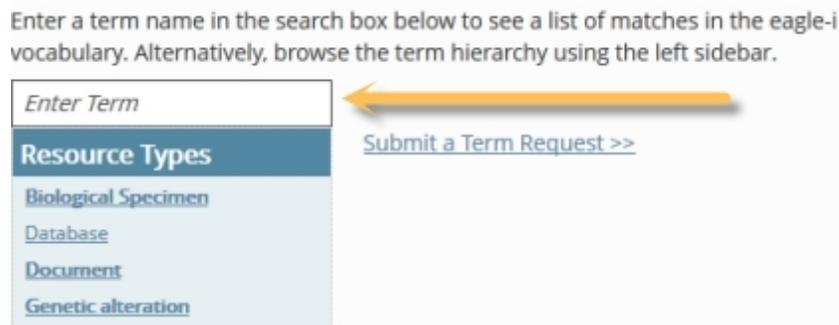
Four yellow callout boxes provide additional information:

- "Parent terms above this one in the hierarchy." points to the "Is a:" list.
- "Child type, or sub-type, below this one in the hierarchy." points to "Inverted stereo microscope" in the sidebar.
- "Alternate names for this term. These will also appear in autosuggest." points to the "Synonyms:" list.
- "Properties correspond to the fields used to enter information about this resource type in the SWEET." points to the "Properties:" list.

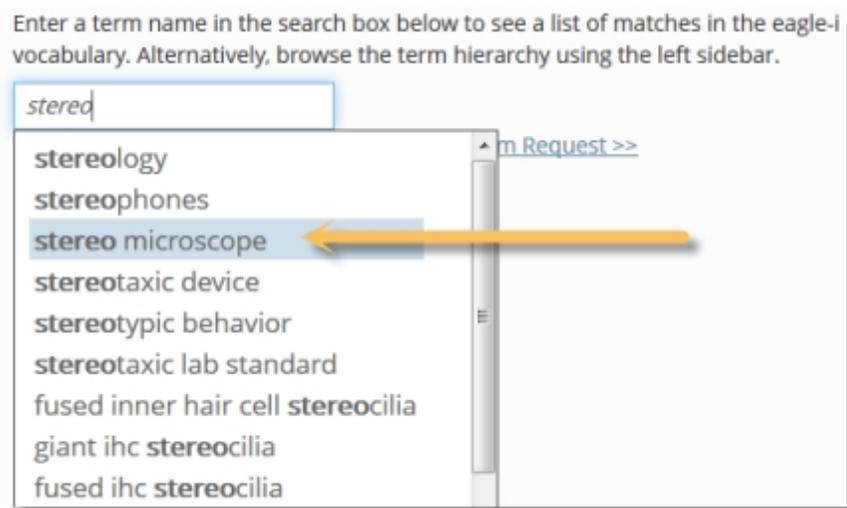
- Click any term in any order to view its information. Sidebar items in bold font have child terms; items in plain font do not.

-or-

- Type a term name in the search box above the left sidebar.



- As you type the query text, you see a list of potential query completions that are generated using auto-suggest technology from the eagle-i ontology.



- To view information about a term, either type in the full, matching term and hit Enter, or click on one of the auto-suggested terms. The selected term is highlighted in the left sidebar with its child terms, if any, displayed below it. The main body of the page contains information that describes a term’s properties and where it fits in the ontology:
 - **Is a** - the terms (classes) of which the selected term is a sub-class.
 - **Synonyms** – any equivalent terms or alternative names for the selected term.
 - **Definition** – describes how the selected term is defined for eagle-i purposes.
 - **Properties** – these reflect the data fields that are available for the selected type in the data tool. Click on a property name to toggle its definition into view. Click on a property name to toggle its definition into view.
- Click the **Term Comment** link beneath the properties section for any term to send any feedback about the term to the eagle-i Ontology Team. Feedback could include information such as corrections or suggestions for new synonyms. Click the

Submit a Term Request link to be taken to the ERO Term Tracker. See [Submitting Term Requests](#) for more details.

The image shows a web form titled "Term Comment". It has three main input fields: "From" (a text box), "Subject" (a text box containing "[Term Comment] Stereo microscope (Instrument | Micros...)", and "Comment" (a large text area). Below the fields are "Submit" and "Cancel" buttons. At the bottom left is a link "Submit a Term Request >>".

Callout boxes provide additional information:

- Top right: "Clicking the **Term Comment** link opens a short form where you may leave feedback on an existing ontology term."
- Middle right: "Please include an email address where the Ontology Team can contact you for further information or clarification." (An arrow points from this box to the "From" field.)
- Bottom right: "Link to the **ERO Term Tracker**, where new term requests can be submitted to the central eagle-i Ontology Team." (An arrow points from this box to the "Submit a Term Request >>" link.)

Limitations

- Because only ten auto-suggestions are displayed at a time, the auto-suggestions for terms that have more than ten matches in the ontology are not a complete representation of every available term.
- To find a term that isn't appearing as an auto-suggestion, users should try different variations of the word. Typing the least common sections of a word or phrase can sometimes bring up more effective results.
- In addition, users should remember that a term that appears in the Ontology Browser may not yet be available for annotation, due to the lag time between ontology updates and new releases of SWEET.

Term Requests

Term requests are one way new terms are added to the eagle-i ontology. If you want to annotate a field with a term that is not currently available, select the next most applicable term, and then submit a term request for the most specific one you would like to use.

Term request topics in this section:

- [How to submit a term request](#)
- [How to publish records with open term requests](#)
- [How to fill term requests](#)

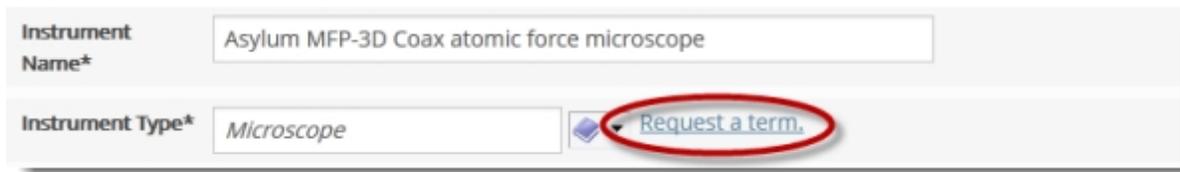
Submitting Term Requests

Any field marked with a blue book icon is an [ontology/controlled vocabulary field](#), meaning that it must be filled with a term from the eagle-i ontology. If the term you want to use is not available, you can request it be added to the ontology by submitting a term request form.

Submitting Term Requests in the SWEET

Procedure for submitting term requests:

- Use autosuggest or browse the hierarchy of terms under the blue book icon to select the closest existing parent term to the one being requested. If no closer term exists, annotate it with the root type. For example: if the term *atomic force microscope* were requested for an instrument type, the closest parent term would be *microscope* instead of the root type, "instrument." Only if microscope was not available should this field be left as instrument.



The image shows a form with two main sections. The first section is labeled 'Instrument Name*' and contains a text input field with the value 'Asylum MFP-3D Coax atomic force microscope'. The second section is labeled 'Instrument Type*' and contains a dropdown menu with the value 'Microscope'. To the right of the dropdown menu is a blue book icon, and next to it is a link that says 'Request a term.'. This link is circled in red.

2. Click the **Request a term** link, found to the right of every [ontology/ controlled vocabulary field](#).
3. A Term Request form appears.
 - The **Closest Term** field will be auto-populated with the term selected in step one.
 - Either a **Requested Term** or a **Tracker URL** is required. See below for instructions on the using the ERO Term Tracker.
 - The **Description** field is optional, but providing as much information about the requested term as possible will help the ontology team process your term request most efficiently. The most useful descriptions are definitions of the term being requested along with a corresponding source, i.e. URLs, people, books, etc.

Term Request

Please use this form to suggest a term to be added to the eagle-i ontology (or request a new term through the [ERO Term Tracker](#)). Please provide descriptive information to expedite the process.

Closest Term

Microscope 

Requested Term

atomic force microscope

Description

A scanning force microscope used for determining the surface topography of native biomolecules at subnanometer resolution. It allows biomolecules to be imaged not only under physiological conditions, but also while biological processes are at work.

(http://en.wikipedia.org/wiki/Atomic_force_microscopy)

Tracker URL

<http://code.google.com/p/eagle-i/issues/detail?id=175>

Request **Cancel**

4. After you have completed the form, click **Request**.

Using the ERO Term Tracker

The ERO Term Tracker, or Google Code Tracker, is used by the ontology team to log and track term requests. Each term request has a single issue ticket. If a ticket already exists for the term you are requesting, there is no need to create a new one; simply copy the URL of the existing ticket and paste it into the **Tracker URL** field in the term request form in the SWEET.

If there is no existing ticket, you can fill the term name in the **Requested Term** field instead. A member of the ontology team will issue a ticket for it in the tracker at a later time. Advanced users may choose to create their own issue tickets in the tracker directly, particularly in cases where the same term request will be applied to multiple records. **If you create your own issue ticket, you must still paste the URL into the Tracker URL field for every record where it should be applied in the SWEET.** This will allow the records to be updated when the term is added.

Note: A valid Google e-mail address is required to use the tracker.

Finding existing issues:

1. Go to the [ERO Term Tracker](#) site. Open the **Issues** tab.
2. Search or browse through the **Open issues** for the term you are requesting.

The screenshot shows the eagle-i research resource ontology interface. At the top, there are navigation tabs: Project Home, Downloads, Wiki, Issues (selected), and Source. Below the tabs is a search bar with a dropdown menu set to 'Open issues'. The dropdown menu lists search filters: 'All issues', 'Open issues', 'Open and owned by me', 'Open and reported by me', 'Open and starred by me', 'Open with comment by me', 'New issues', and 'Issues to verify'. Below the search bar is a table of issues with columns for ID, Type, Status, Priority, Owner, and Summary + Labels.

ID	Type	Status	Priority	Owner	Summary + Labels
12	---	Open	---	sc...@eagle-i.org	Office
13	---	Open	---	sc...@eagle-i.org	MGI ID
14	---	Open	---	sc...@eagle-i.org	Nanoparticle size analyzer
15	Accepted	High	---	sc...@eagle-i.org	New organization: Registry
16	New	---	---	---	Imaging mass spectrometry sample preparation system
20	Accepted	High	---	sc...@eagle-i.org	Energy-dispersive X-ray spectroscopy
21	New	---	---	---	Electron energy loss spectroscopy
23	Accepted	High	---	sc...@eagle-i.org	Cryo-electron microscopy
25	New	---	---	---	created by

3. Click on the **ID** to open any ticket. Copy the full URL into the term request form in the SWEET.

Creating new issues:

1. Create a "New Issue" on the [ERO Term Tracker](#) site.
2. Using the text template, provide as much information about the requested term as possible. An example can be found at the bottom of every new ticket.
3. In the **Additional Information** field, include the eagle-i Unique ID (or URI) of the eagle-i records for which the term is needed. The URI can be found in the Metadata section at the bottom of every record. If the term applies to multiple records, please include the URIs for each.
4. Submit the issue ticket.
5. Copy the URL of the issue ticket and paste it into the **Tracker URL** field in any eagle-i records where the term is needed.

Note: After the record is saved, anything entered into the Term Request field is displayed in the Metadata section at the bottom of the record. Term requests will not be visible in search.

Publishing Records with Open Term Requests

Resources with open term requests should be published if they otherwise meet all eagle-i standards.

1. If the requested term has been entered into in the Term Request form without an ERO Term Tracker ID, search [the open tracker issues](#) to see if an issue has already been created. If it has not, create the issue, and then copy and paste the ticket URL into the Tracker URL field.

2. Make sure the closest parent to the term being requested has been selected from the ontology: for example, if the term *confocal microscope* was requested for an instrument type, the closest parent term would be *microscope*, not *instrument*.
3. Publish the record.

Filling Term Requests

New terms that have been added to the ontology are only available in the SWEET after a new release of the software, which occur 2-4 times a year. Typically, members of the central eagle-i curation and ontology teams will update records with outstanding term requests after a new release. To do so:

1. For all term requests with existing [issue tickets](#), run a SPARQL query to find all current records that have open terms requests in the SWEET.
2. Search that list for the term or ticket ID of the term, open those records, and replace the current term in that field with the new term.
3. Use the Comments field to indicate that the term request was filled, along with your initials (for example, 'NV: Filled term request 8/15/2012').

Other users may also fill outstanding term requests if they come across them and notice that the requested term is now available in the ontology.

1. Select the requested term, replacing whatever parent term was originally entered in that field.
2. Delete the Issue ticket information from the Metadata section.
3. Use the Comments field to indicate that the term request was filled, along with your initials (for example, 'NV: Filled term request 8/15/2012').

SWEET General Annotation Guide

This section contains detailed annotation guidelines for entering and reviewing organization, people, and resource records in the eagle-i SWEET.

- [Annotation Guidelines for Organizations and People](#)
- [Annotation Guidelines for Resources](#)

Standardization and Grammar

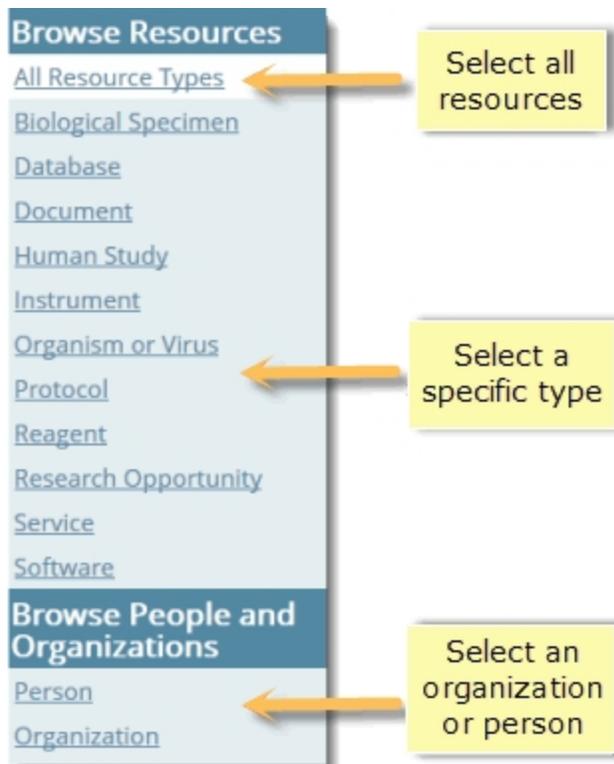
The following general standards should be used for all annotations:

- **Capitalization** - Capitalize the first letter of all resource names, unless the official name begins with lowercase, such as "eagle-i" or the software "jMURI". When the resource name contains multiple words, either Sentence Case or Title Case can be used, unless the official name contains specific capitalization, such as company names and publications. The first and last names of all people should be capitalized unless they contain a lowercase prefix.
- **Articles** - Resource names should never begin with "the," "a" or "an". The sole exception is publication titles that begin with an article. These should be quoted exactly in the resource name.
- **Quoted material** - Some fields, most often resource descriptions, may contain quoted material from external sources. eagle-i permits publication of quoted material, provided:
 - All quoted text is clearly identified using quotation marks.
 - All quoted material is accompanied by a source URL in the Web site(s) field. If the source is not a web page, then it should be cited using APA Style (<http://www.apastyle.org/>) underneath the quoted material.
- **Punctuation** - Resource descriptions should always be complete sentences beginning with a capitalized first word and ending with a period. All other fields that contain complete sentences should be properly punctuated. If a field is filled with a sentence fragment, curators should convert this to a full sentence wherever it makes sense to do so, but may leave one or two word fragments as is.
- **Abbreviations** - If there is an abbreviation for a resource name, both the spelled out version and the abbreviation should be included somewhere in the record for search purposes. In general, the abbreviation should be spelled out in the resource name field and the abbreviation itself should go in the Alternate name field, unless the abbreviation is so much more common that seeing the spelled out version in the main name field would cause confusion for users. Any subsequent usage of the name can use the abbreviation for brevity.
- **Numbers** - Per the Microsoft Manual of Style, "Use numerals for 10 and greater. Spell out zero through nine if the number does not precede a unit of measure or is not used as input. For rounds numbers of 1 million or more, use a numeral plus the word, even if the numeral is less than 10."

- **Super/subscripts** - May be represented using either brackets or HTML:
 - Superscripts may be indicated using square brackets around the text. For example, for allele names: *agil*^{2J} would be entered as *agil*[2J].
 - Both super- and subscripts can also be represented using the HTML tags <sup> and <sub>. In particular, these tags should be used for resources for which the addition of extra brackets might be misleading. For example: the chemical compound [¹¹C]CH₃I (methyl iodide) would be entered as [¹¹C]CH₃I. In these cases, in order to ensure the resource will still come up in search results, a version of the name without the HTML tags should also be entered in the Additional Name field.
- **Smart quotes** - The system cannot currently support smart quotes. Be sure to replace these when copying and pasting from outside sources.
- **Empty fields** - If a field does not apply, it should be left blank, which means the field will not display. Entering "none" or "n/a" unnecessarily clutters the record.
- **Foreign languages** - If a resource's proper name is in a language other than English:
 - The Alternate Name field should contain the non-English version of the name.
 - If the resource is a document in another language, or if the record includes a link to a website that is not in English, this should be noted in the resource.
 - The main resource name field should contain the English translation of the name.

Annotation Guidelines for Organizations and People

At a high level, *organizations* and *people* are considered resources in the eagle-i system, and as such, they are cataloged with their own individual records that must be sent to curation and published like any other resource. This categorization is confusing and counter-intuitive for many users, so for practical purposes, they are displayed under a separate heading in the Browse People & Resources in My Institution area of the Workbench.



They are also treated separately in terms of usage and content metrics.

E-mail and Privacy

eagle-i currently hides information related to physical addresses, e-mail addresses and phone numbers of all organizations and people, in response to the privacy concerns of certain researchers (in particular, research laboratories that work with animals). Although this information can and should be entered in the SWEET, it will not display in the search application. The affected fields are:

- E-mail
- Lab delivery address
- Mailing address
- Phone number

In some cases, laboratories may request that entire person records be removed from search to keep even their names from displaying. Those person records should be [withdrawn](#) with an explanation added in the **Comments** field. If the removed person's email was the sole contact email for that organization, either:

1. Add a generic organization email to the organization record.

- or -

2. Migrate the email address of the withdrawn person to the owning organization email field. Because eagle-i uses an anonymous contact form in the search application, the actual email address will remain hidden, but users will still be able to contact the person.

Organizations Information and Workflow

Organizations include laboratories and other resource providers, manufacturers, and affiliates. Note that these are not mutually exclusive categories; it is possible for an organization to be listed as an affiliate of or parent organization to other resource-providing organizations while also providing resources itself. Corporate manufacturers should be classified as private companies and are the only type of records that cannot provide resources.

Using the eagle-i [Workbench](#), you can add new organizations or browse existing organization records. From the Workbench, you can select a single organization or you can choose to browse through a list of all of the organizations at your institution.

Browsing / Viewing Organization Records

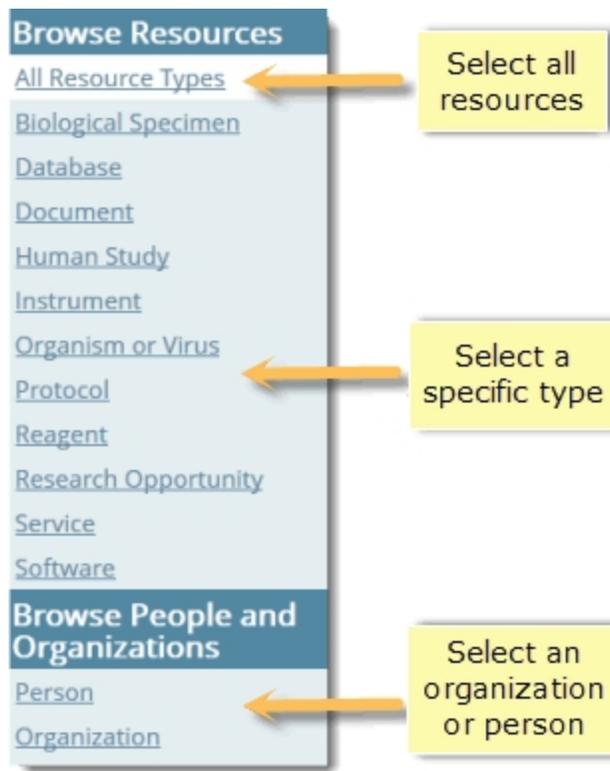
There are several ways to access organization records.

To view organizational records:

- To go directly to a particular resource providing organization, open the **Workbench** and select the organization by name from **Work With My Organizations**. Private Companies are the only type that are excluded. Once you open a record, details about the selected organization are displayed in the center of the page and links to resources associated with that organization are displayed in the Resource Types side bar on the left side of the page.

- or -

- To browse all organizations, including private companies and all potential resource-providing organizations in an institution, click **Browse People and Resources in My Institution**, then *Organization*. Note that inclusion in this list does not guarantee an organization currently contains any resources, merely that it has the ability to do so. From here, you can sort by status to easily find records in curation and/or records that have been locked.



Use the sidebar to the left of each organization record to navigate through the resources associated with that organization.

Creating Organization Records

Watch [this video tutorial](#) for a demonstration of how to create organization records in the SWEET.

To create an organization record:

- From the Workbench, click **Create an Organization**. Selecting an organization sub-type determines which additional fields will populate the record. Refer to the [Organization Field Annotation table](#) for guidelines for entering data.



- or -

- From within another record, use **<create new>** from either the affiliation or manufacturer fields. Organization records that are created from within another record are considered unfinished [stub records](#) until they have been edited and saved.

To create a new manufacturer for an instrument, select **<create new>** in the manufacturer field.

Complete the **Name** and **Type** fields and then save the instrument record.

A resource stub will be created. It can be completed after saving.

Next steps: After you save the organization you can:

- [Add resources](#). After the organization record has been added, you can associate resources to this organization. You do not need to wait for the record to be published; as soon as the organization record has been added, resources can be added.
- [Send to curation](#). Use this option when you are ready for the information to be reviewed and published.
- [Share](#) the record. Use this option if you want other users at your institution to edit this organization.

Publishing Organization Records

All person records associated with an organization or resource should be published at the same time as the organization record whenever possible. If, for some reason, not all associated person records are ready to be published with the organization record, you should ensure that *there is at least one published contact e-mail address for the organization*. This e-mail address is used when a search user clicks the **Send Message to Resource Contact** button.

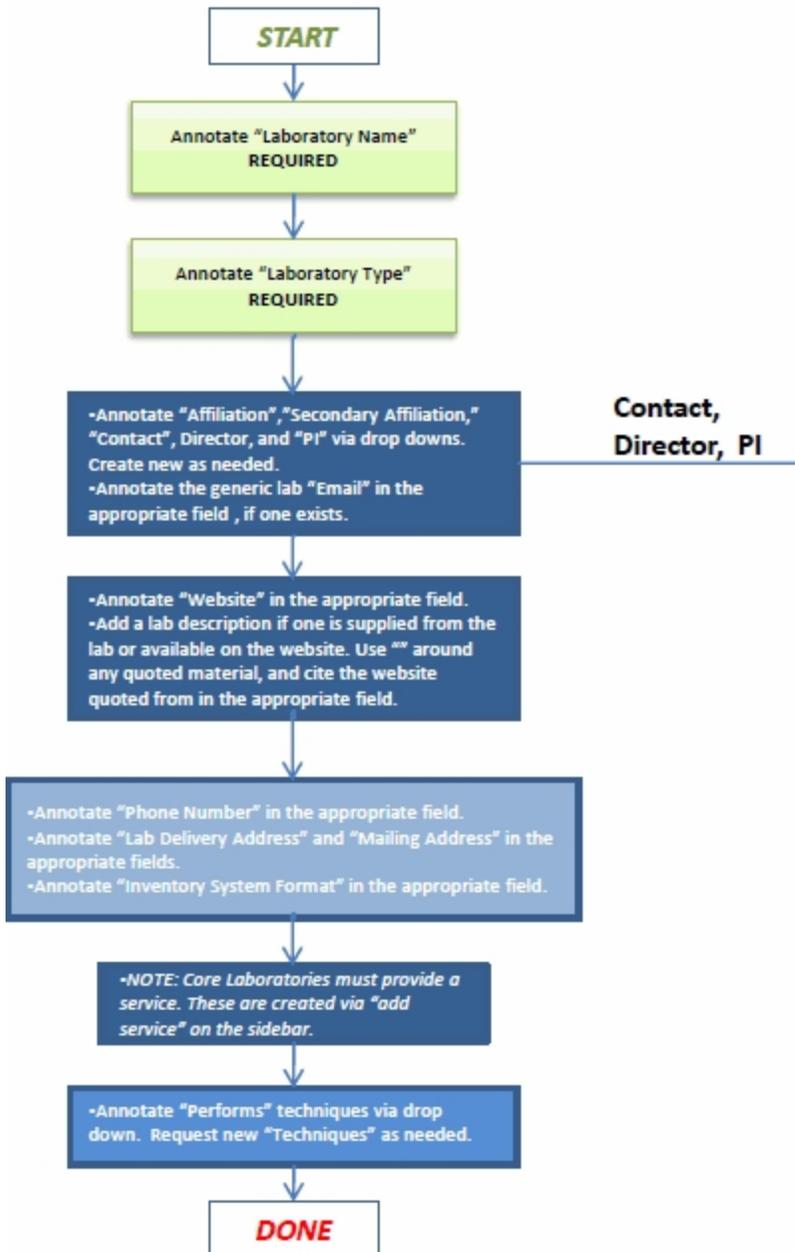
See [E-mail and Privacy](#) for more information.

About Core Facilities

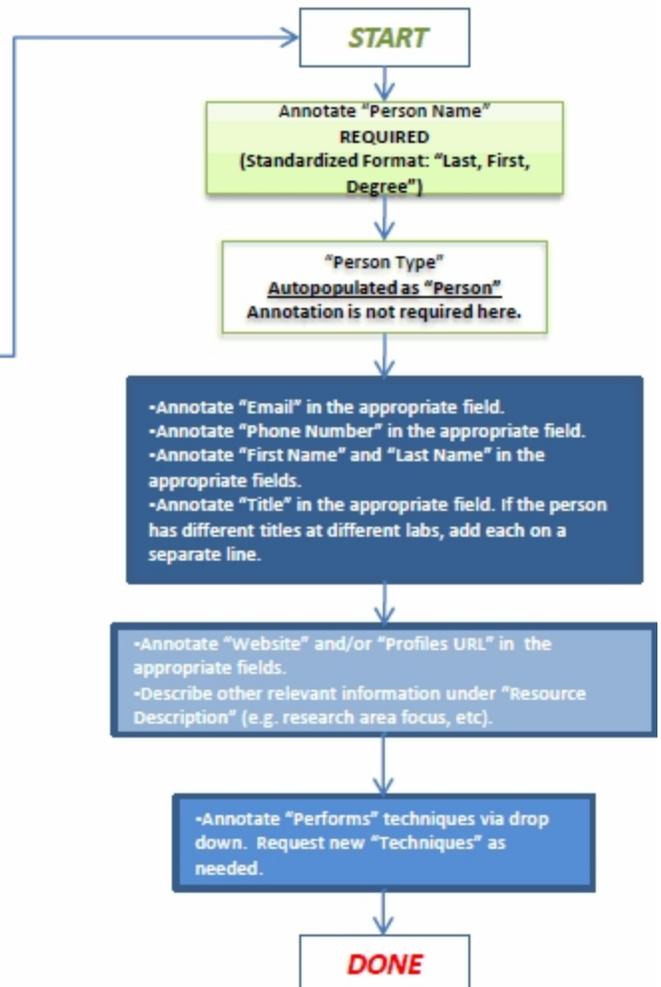
Core Facilities are a sub-type of organization. The eagle-i ontology defines a Core Facility as a type of laboratory that has the mission of providing services. Although many of the resources offered by Core Facilities are not strictly invisible, they are still extremely valuable, and exposure in eagle-i means that they can be easily discovered by a wider audience—either through directly searching, or through links to other resources they search for (microscopes, for instance).

By definition, every Core Facility must provide at least one service, even if that service is merely access to equipment or facilities. A service is a planned process carried out by an organization with the objective of performing a technique, providing training, providing storage of data or physical resources, or providing access to instruments for another person or organization. See the [Service annotation guidelines](#) for more details.

Laboratories



Person



**Contact,
Director, PI**

Organization Records Field Annotation

Note: NR indicates a non-repeatable field.

Not all types of organization records contain all of the fields listed below, as the fields differ depending on the sub-type chosen. Laboratories are the main type of organization record in the SWEET, and the means by which the majority of eagle-i resources are organized and most easily accessed. They are the only type to contain all of the fields listed. Therefore, it is especially important to make sure the record is typed correctly as a Laboratory or Core Laboratory before annotating or curating it.

Field	Description	Re-q.	N-R
Organization Name	<p>Identifies the laboratory name. If it is not already there, add the word "Core" to all core laboratories unless it does not make sense to do so: For example, Center for Crystallographic Studies. Laboratories within an institution with the same name should be distinguished from one another within the title. Example: "Flow Cytometry Core Laboratory (BWH)" and "Flow Cytometry Core Laboratory (BIDMC)".</p> <p>Note: it is especially critical to ensure that all labs added using the ETL process have unique names prior to beginning the process, otherwise data from different labs will be merged in the repository.</p>	Yes	✓
Organization Type	<p>Identifies the organization's type. For laboratories this is either Laboratory or Core Laboratory. All core labs must provide services, but not all labs that provide services are automatically considered core labs.</p> <p>Note: If the lab does not provide services but is typed as a core lab then it should not be published until at least one service record has been created.</p>	Yes	✓
Organization Additional Name	Alternate organization name(s). Include any abbreviations or alternate spellings.		
Organization Description	A brief overview of the organization. Include any information that describes the organization that is not captured in any of the other fields. Include quotation marks around any quoted material from a website, and input the source URL in the Website(s) field near the bottom of the form.		
Contact	<p>Name of the primary "point person" for the organization. Should be entered in the format: <i>Last name, First name, Degree</i>, if available, for example, <i>Smith, John, Ph.D.</i> The same person may also be listed under Contact, Director and/or PI.</p> <p>Check to make sure a record for the person you want to add does not already exist before creating a new record. See guidelines for creating people records.</p>		
Director	Name of the person who directs the organization. Should be entered in the format: <i>Last name, First name, Degree</i> , if available.		
Additional Members	Name(s) of any additional people associated with this organization. If a person is already listed as the organization Contact, Director or PI, then they should not be listed in this field. If only one person is listed for a lab, they should be listed in one of the other fields. Should be entered in the format: <i>Last name, First name, Degree</i> , if available.		
PI	Identifies the Principal Investigator (PI) name for the organization. This field should be filled separately, even if the Contact and the Principal Investigator are the same person. Use the PI (co-Investigator) field to note any co- or secondary PIs, if applicable. Enter in the format: <i>Last Name, First Name, Degree</i> , if available.		

PI (co-Investigator)	Identifies the names of any co-Principle Investigators (co- PIs) for the organization. This field should be filled separately, even if the Contact and the co-PI is the same person. This field should be used to distinguish the primary PI from any co- or secondary PIs. Enter in the format: Last Name, First Name, Degree, if it is available. Add as many as needed.		
Email	Generic e-mail address for the organization. Note: It is only necessary to fill this in if there is a generic e-mail for the lab itself, for example, biomedicallab@harvard.edu . Otherwise, leave this field blank. Personal e-mails belonging to any people associated with the organizations should be listed on the records of those individual people only.		
Lab Delivery Address	Identifies a physical location address for the delivery of packages, and so forth. Some labs might be required to use a central mailing address for correspondence, but use a separate physical location address for the delivery of packages. Delivery address and mailing address may be identical. Use the following format: Biomedical Lab Harvard University 123 Cambridge Street Cambridge, MA 02138		
Mailing Address	Identifies a central mailing address for correspondence. Use same format as Lab Delivery Address.		
Phone Number	Organization's phone number. Use the format: (xxx) xxx-xxxx Ext. xxx.		
Affiliation	Identifies the primary institutional and consortial affiliations or certifying organization for the organization. Note: top-level university affiliations do not need to be included as affiliates as they are implied by those records' inclusion in the university's institutional repository. For generic departmental affiliates, format the label as follows: Department of [department name], [institution] (ex. Department of Biology, University of Alaska).		
Secondary Affiliation	Identifies any secondary institutional and consortial affiliations or certifying organizations for the laboratory, except for the top-level university affiliation.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the lab's services or resources.		
Inventory System Format	Identifies the format of the current method used to inventory lab resources, such as LIMS, Excel file, index card file, FileMaker database, 3-ring binder, and so forth. Only for Laboratory and Core Laboratory organization types.		
Performs Technique	Use the drop-down menu to identify any techniques used by the organization that are not noted in a separate resource record associated with the lab. Only for Laboratory and Core Laboratory organization types.		
Website (s)	The web address or addresses pertaining to the organization, if applicable. Web page URLs should be in the format <a href="http://<lab name>">http://<lab name> or <a href="https://<lab name>">https://<lab name> . The simplest form of the address should always be used. In other words, if both http://www.longwoodsaif.org/index.html and http://www.-longwoodsaif.org/ open the same page, then the second URL should be used. Curators should check each link to ensure it is a valid web address before including it.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Notes	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who		✓

made them.		
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Guidelines for Technology Transfer Offices

Many institutions have an Office of Technology Transfer (TTO) that protects the institution's intellectual property and helps facilitate potential commercial opportunities developed from research done at that institution.

eagle-i collects information about resources (usually services) provided by these TTOs, also referred to as technology transfer offices. However, these resources tend to be a little different from those typically offered by laboratories. For instance, while tech transfer offices often provide access to physical resources via a license agreement, they do not own the actual resources themselves. Therefore, some additional guidelines apply:

- **Naming conventions** — Like departments, many institutions will have similarly named tech transfer offices. Therefore, each should include the name of the institution to distinguish them in search results, for example, *Technology Transfer Office, Montana State University*
- **General services** — The services offered by tech transfer offices are usually support or access services. Many offices at different institutions will offer the same basic services; the differences will be in the specific research available for commercialization at each institution. To maintain consistency, use the search application to see how similar services have been annotated in the past. Generic services typically offered include:
 - Technology licensing—access service
 - Invention reporting—support service
 - Copyright registration—support service
 - Confidentiality agreements—support service
 - Negotiation of various agreements such as material transfer, facilities/equipment use, non-disclosure, and so on. Generally these are support services, but may be classified as access services depending on the specifics of the type of agreement.
- **Granularity of data collected** — Although more detail is usually preferable, due to the legal sensitivity of many of these resources, different tech transfer offices may wish to limit the exposure on eagle-i to the specific licensing opportunities available at their institutions. Therefore, the annotation guidelines for these types of resources are flexible:
 - A generic “umbrella” licensing service record with a link to the office’s website and/or contact information for more detail is sufficient if the office does not wish to share any more granular data.
 - If information about specific licensing opportunities is available, then it should be entered in the resource description along with whatever keywords might be useful for calling up the record in search.
 - If there are too many licensing opportunities to fit in one record, they should be reorganized them into broad categories, if possible. It is not best practice to create individual records for every commercial opportunity at an institution.

People Records Introduction and Workflow

People can be contacts, directors, PIs, manufacturers, developers, and authors in the eagle-i system. Information about each person is captured in a separate record, which can be linked to multiple organizations or resources.

Browsing / Viewing Person Records

Person records can be accessed either by navigating to **Browse People & Resources in My Institution** from the [Workbench](#), or by clicking on the name of the person from within any record from which they are linked. If no specific contact is manually assigned to a resource, the system will infer that the generic contact for the organization is that resource's contact.

Creating Person Records

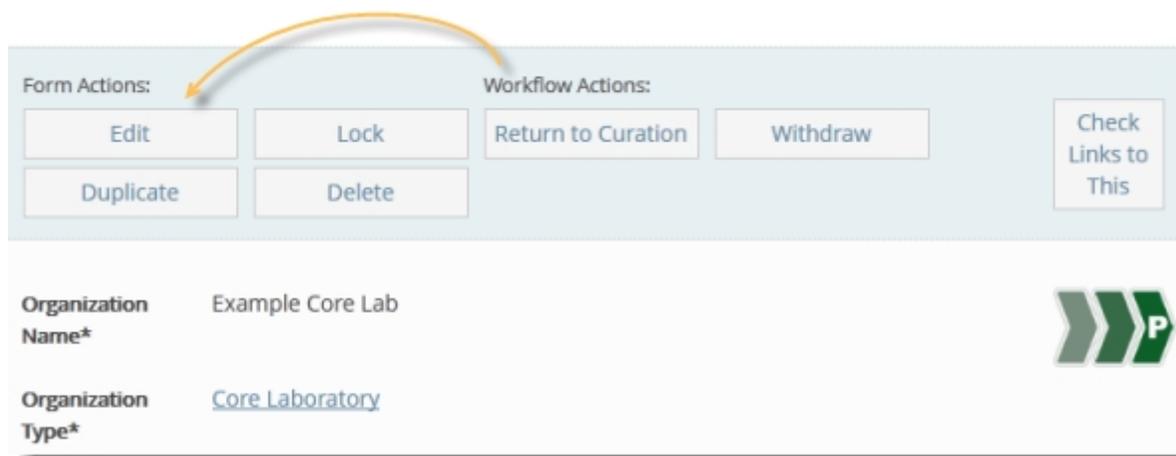
The only way to create new person records is using **<create new>** from within another existing record.

Before adding a person record, you should ensure that a record for that person does not already exist. To check for duplicates, you can either look at the full list of people under **Browse People & Resources in My Institution > Person** or browse through the list of people in the field where you are adding the person.

Remember to check for records beginning with both the first and last names of the person, as sometimes people are entered with both formats in error. If duplicates are found, they will need to be merged. See [Merging Records](#).

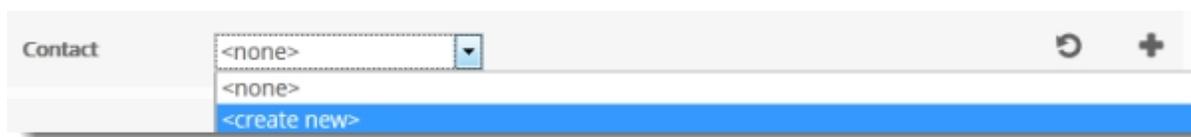
To create a person record:

1. Open an existing record and select Edit.



The screenshot displays a user interface for managing person records. At the top, there are two sections: "Form Actions" and "Workflow Actions". The "Form Actions" section includes buttons for "Edit", "Duplicate", "Lock", and "Delete". The "Workflow Actions" section includes buttons for "Return to Curation" and "Withdraw". To the right of these sections is a button labeled "Check Links to This". Below the actions, there are two fields: "Organization Name*" with the value "Example Core Lab" and "Organization Type*" with the value "Core Laboratory". A green arrow icon with a white 'P' is visible on the right side of the form.

2. **<create new>** is available from any of field that links to a person, including: Contact, Director, PI, Co-PI, Manufacturer, Developer, and Author. Before adding a new person, open the drop-down list to show all existing people records at your institution. If you still don't see the person, click **<create new>**.



3. Type the person's name in the format: last name, first name.

A screenshot of a web form titled 'Contact'. The 'Contact' dropdown menu is set to '<create new>'. Below the dropdown is a message: 'A resource stub will be created. It can be completed after saving.' There are two required fields: 'Person Name*' with the text 'Doe, Joan' entered, and 'Person Type*' with the text 'Person' selected. A small blue icon is visible to the right of the 'Person Type*' field.

4. The new record is added as an unfinished resource stub and will appear in the **View My Resource Stubs** list, found off the main **Workbench**. [show me](#) See the [Resource Stubs](#) section for more information.



Publishing Person Records

All person records associated with a resource owning organization should be published at the same time as the organization record whenever possible.

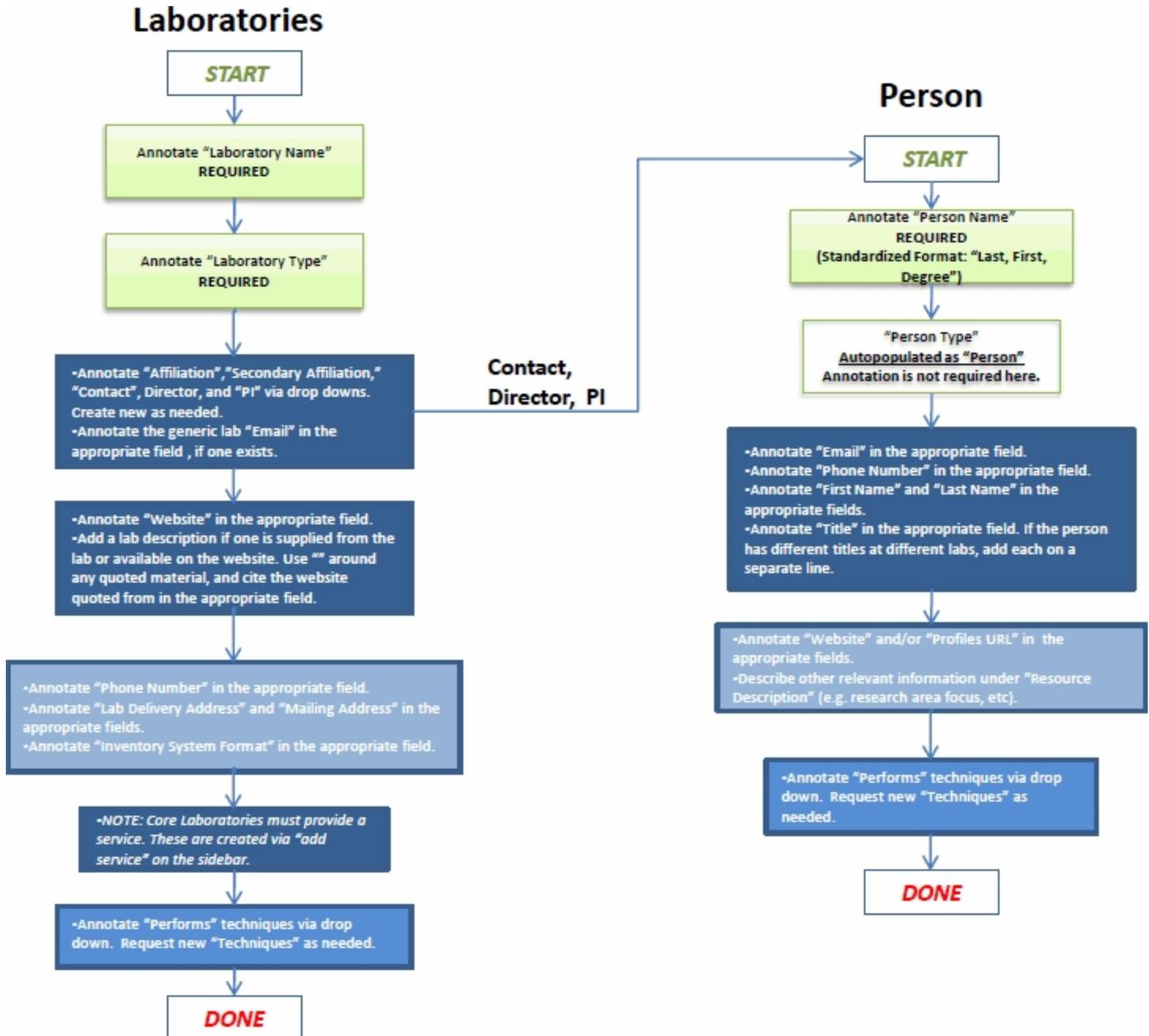
If, for some reason, not all associated person records are ready to be published with the organization or resource record, you should ensure that *there is at least one published contact e-mail address for the resource*. This email address can either be a generic organization email used in the organization record itself, or a personal email for one of the people associated with the organization, and will be used when a search user clicks the **Send Message to Resource Contact** button for any of the organization's resources.

See [Email and Privacy](#) for more information.

Withdrawing Person Records

Person records are often [withdrawn](#) due to organization staffing changes. Before withdrawing a person record, use the [Check Links to This](#) button at the top of the record to make sure the person is not associated with any other published organizations at the institution. If so, then the record should remain published, but any references to the withdrawn organization should be updated.

Note: When withdrawing person records associated with published resource owning organizations, you should ensure that at least one valid email address for the organization is still published, either in the organization record itself or in another published person associated with the organization. If no other valid email remains, contact the lab.



People Records Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Person Name	Should be entered in the format: <i>Last name, First name, Degree</i> (if available). (Example: <i>Smith, John, Ph.D.</i>) List multiple degrees separated by commas: <i>M.D., Ph.D.</i> If the person is listed as Dr., curators should attempt to determine whether this refers to an M.D. or Ph.D. degree and use those more specific titles instead.	Yes	✓
Person Type	There are no sub-types for people. Do nothing to this field.	Yes	✓
Person Additional Name	List any nicknames or additional names for the person here, if requested by the person.		
Person Description	Include any information that describes the person and is not captured in any of the other fields. Separate or unrelated pieces of information should be delineated with their own paragraphs whenever doing so would make the description visually or contextually easier to read. The description should be written as complete sentences with first letter capitalized and a period at the end.		
Email	The person's work or preferred e-mail address.		
Mailing address	Mailing address for the person. Format: Biomedical Lab Harvard University PO Box 5678 123 Cambridge Street Cambridge, MA 02138		
Phone Number	Format as (xxx) xxx-xxxx Ext. xxx		
First Name	The person's first name. Can include a middle name(s) or initial(s), if applicable.		
Last Name	The person's last name.		
Performs Technique	Identifies any technique or expertise for which the person is a contact.		
Profiles URL	This field is specific to institutions that use the open source Profiles Research Networking Software (http://www.recomdata.com/product_profiles.html) developed by Harvard University. If a person has a profiles page, add that URL to this field. If no profiles page is available, this field should be left blank.		
Title	Should include any work titles (e.g. Director, Professor, Manager). Each title should be entered in a separate line and should be as specific as possible (e.g. Director, Flow Cytometry Core or Professor of Bioinformatics). If one person is the director of multiple labs, then each should be listed as a distinct title. Note: degree information belongs in the name field rather than the title field.		
Website(s)	If the person has their own personal or professional web site, include the URL here. Format as <code>http://www.<url>.com</code>		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓

Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		
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Annotation Guidelines for Resource Records

Use the following guidelines when entering or reviewing information about research resources:

- [Biological Specimens](#)
- [Databases](#)
- [Human Studies](#)
- [Instruments](#)
- [Organisms and Viruses](#)
- [Protocols and Documents](#)
- [Reagents](#)
- [Research Opportunities](#)
- [Services](#)
- [Software](#)

What is invisible?

eagle-i focuses on resources that are invisible, rare, or unique for their area.

Resource creators and/or providers (typically researchers, such as postdoctoral fellows, graduate students, core facility managers, etc.) may be well aware of what resources they have and regularly use, but fellow colleagues or other researchers often times are not. As a consequence, researchers may waste valuable time and money recreating or purchasing an animal model, DNA construct, or key piece of equipment is already available in a lab nearby. Although some resources (typically unpublished ones) are invisible for a reason, many can and should be shared once the research has been published in a journal. Sharing information about what researchers have opens up the possibility of forming new collaborations to help take their research in new and exciting directions. Of course, it remains up to the resource owner to determine what and how a resource should be shared.

In some cases, resources that might be ubiquitous at one institution will be extremely valuable to a smaller or more rural institution where those resources are scarce. Those resources may be cataloged in eagle-i, but should include a clear resource description that indicates how or why they are important.

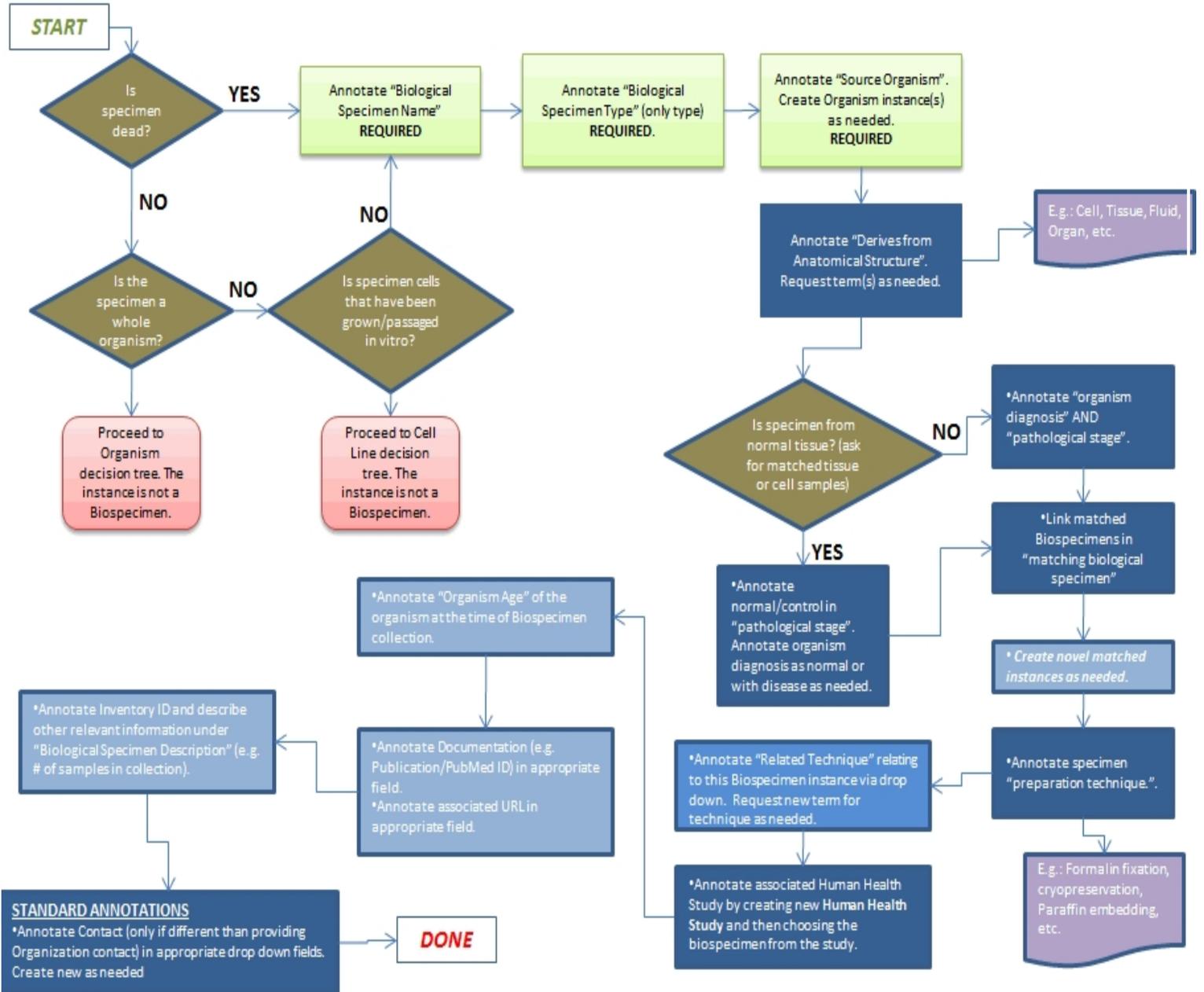
In general, however, eagle-i does not collect information about: refrigerators, Xerox machines, telephone systems, and basic computers and cameras, kit instructions as protocols, and common chemical reagents such as Sodium Chloride (NaCl).

Biological Specimens Introduction and Workflow

A biospecimen is a portion or quantity of a biological material for use in testing, examination, or study; it can be an individual animal, part of an organism, or something derived from an organism or organisms.

Sometimes people confuse biological specimens with organisms: for example, insect specimens at a museum would be considered biological specimens, not organisms. But trees in an arboretum would be considered organisms. Currently, eagle-i distinguishes these two based first on whether or not the entity is alive. If it is alive, it is not a biological specimen. If it is dead, the most critical information is what species and what anatomical structure the specimen is derived from. If the specimen is live cells that have been passaged in vitro, then it should be annotated as a cell line (or primary culture).

Biological Specimens



Biospecimen Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Biological Specimen Name	The label of the biological specimen. Examples: Pathological tissue: Breast tissue displaying fibroadenoma or Normal/control pathological tissue: Control breast tissue.	Yes	✓
Biological Specimen Type	Should be left at the root type "Biological Specimen," as all sub-types are equivalent classes for classifying instances. The appropriate sub-type will be automatically inferred when the organism is added in the Source Organism field, described below.	Yes	✓
Biological Specimen Description	Should include any information that describes the biospecimen but is not captured in any of the other fields. High value information: Whether the tissue is normal or diseased; if there is a diseased state, what that is; the nature of any matching specimens. Even though the two specimens can be linked (see below) it may be necessary to further describe the nature of the match: same patient disease vs. normal tissue, siblings, etc. If a description isn't included, then the record creator or a domain expert should be consulted before publishing.		
Biological Specimen Additional Name	Any alternate biospecimen name(s). Should include any abbreviations or alternate spellings for the resource.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the biospecimen. Not needed if the same as the providing organization contact.		
Diagnosis	The clinical diagnosis of the organism at the time of specimen collection.		
Pathological Stage	Indicate the stage that has been assigned to the biological specimen, such as, cancer stage, degeneration stage, normal or control.		
Source Organism	The organism from which the biological specimen is derived. It is possible for one biological specimen to have been derived from more than one organism, for example: blood samples or other specimens from two different organisms mixed together. In most cases, only one source organism should be applied to each separate specimen. If the same type of specimen is available from multiple organisms, then a separate record should be created for each. Check the dropdown list to see if the generic organism type already exists in eagle-i. Add a term request for it if it does not.	Yes	
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the biospecimen.		
Inventory Number	The lab or organization's inventory identifier for the resource. For commercial resources, this field may also include a commercial catalog number. External inventory numbers should be distinguished by including the name of the company, following by a colon, and then the number, e.g. Cell signaling catalog number: 7634.		

Matching Biological Specimen	Identify the matched biospecimens, if any exist. This will involve creation of two Biological specimen records and then linking them via this property.		
Organism age at Collection	Indicate the age of the organism from which the specimen was collected in days, months or years.		
Related disease	Enter the disease indicated by the biological specimen diagnosis or other diagnoses on the organism from which the specimen was derived.		
Related grant number	Grant number for the funding that contributed to the development of the biospecimen. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain resource information. For the purposes of annotation, web pages are not considered documents and should be entered into the website(s) field instead.		
Related Technique	<p>Choose one of the following, and select the applicable technique in the ontology box that populates below:</p> <ol style="list-style-type: none"> 1. Choose 'Biospecimen preparation' to indicate the method of tissue preparation, e.g. Formalin fixation, cryopreservation, Paraffin embedding, etc. 2. Choose 'Technique' to indicate the method related to or performed using the biospecimen. Should not include any technique used to generate the biospecimen, such as histological preparation techniques. <p>Add as many lines as needed for multiple preparation methods or other techniques. May include a term request.</p>		
Source Anatomical Structure	Select the anatomical structure from which the biological specimen is derived, e.g. Cell, Tissue, Fluid, Organ, etc.		
Website(s)	<p>Should include any web addresses pertaining to the biological specimen. Curators should check each link to ensure it is a valid web address before including it.</p> <p>Web page URLs should always be formatted with the full address, beginning <code>http://</code> or <code>https</code>, and the simplest form of the address should always be used, in other words, if both http://www.longwoodsaif.org/index.html and http://www.-longwoodsaif.org/ open the same page, then the second URL should be used.</p>		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Database Introduction and Workflow

A database is an organized collection of data, today typically in digital form. Although databases are described using many of the same fields as pieces of software, they should be categorized separately.

Databases Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Database Name	Should contain the name of the Database.	Yes	✓
Database Type	Currently, the only type that can be selected here is 'Database'.	Yes	✓
Database Description	The description should include any information that describes the database but is not captured in any of the other fields. A brief description of the database's function should be included here.		
Database Additional Name	Alternate database name. Should include any abbreviations or alternate spellings for the database.		
Used by	Link to the record of the owning organization that uses the database. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the database. Not needed if the same as the providing organization contact.		
Related Technique	Technique related to the database.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Data Input	Describes the data that is put into the database at the start of its process.		
Topic	Organism, biological process, or disease that is the subject matter of the database.		
Manufacturer	Name of the organization that created the database, which in many cases may be the owning organization. May also be a person, but only if the person mass produces the database. Use the Developed by field for databases not designed for mass production. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Coded in	Select the programming language in which the database is coded.		
Developed by	Name of any people or organizations who designed or helped develop the database for limited or internal use only. If the database was developed for commercial mass production, the manufacturer field should be used instead.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the database.		
Operating System	The operating system(s) with which the database is compatible. Group multiple versions of the same operating system on the same line, for example, "Microsoft Windows XP, Vista, and 7" but use the + function to create a separate line for each operating system if multiple ones apply to the same piece of software:		

	<ul style="list-style-type: none"> ■ Microsoft Windows XP, Vista, and 7 ■ Mac OS ■ Linux ■ Unix <p>The names of common operating systems should be consistently formatted. Use "Microsoft Windows" for all Microsoft operating systems, never just Microsoft or Windows. Use "Mac OS" or "Mac OS X" for Apple operating systems; assume Mac OS as the default if OS X isn't specified.</p>		
Related grant number	Grant number for the funding that contributed to the development of the database. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain database information. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Related Software	Software that is used to operate the database or analyze the data output from the database.		
Version	Should contain the version designation associated with the database. This is often a numeral followed by a decimal and another numeral, for example, "2.1".		
Website(s)	The web address or addresses pertaining to the database, if applicable.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Human Studies Introduction and Workflow

Human studies (HS) are any research studies where the study population is comprised of humans. You may run across some references to “human health studies” or “HHS” in eagle-i documentation, however this usage presupposes a health-only focus to human research at eagle-i institutions. Because this supposition is limiting and potentially inaccurate, the term “human studies” or “HS” is preferable.

Human studies are unique within eagle-i in that, unlike instruments, software, reagents, biological specimens, or other resources, human studies are research projects themselves rather than the resources used to produce research. An important way these studies are commonly described by scientists is based on aspects of their research design and study population, in other words, “randomized double-blind clinical trial”, “cohort study”, and so on. The understanding and documentation of these design distinctions are a critical part of the meaningful annotation of eagle-i human studies, as evidenced by the role they play in the decision points in the human studies decision tree diagram.

Before you begin annotation, it is helpful to look at a previously curated human study record to get an idea of what a completed and curated record looks like.

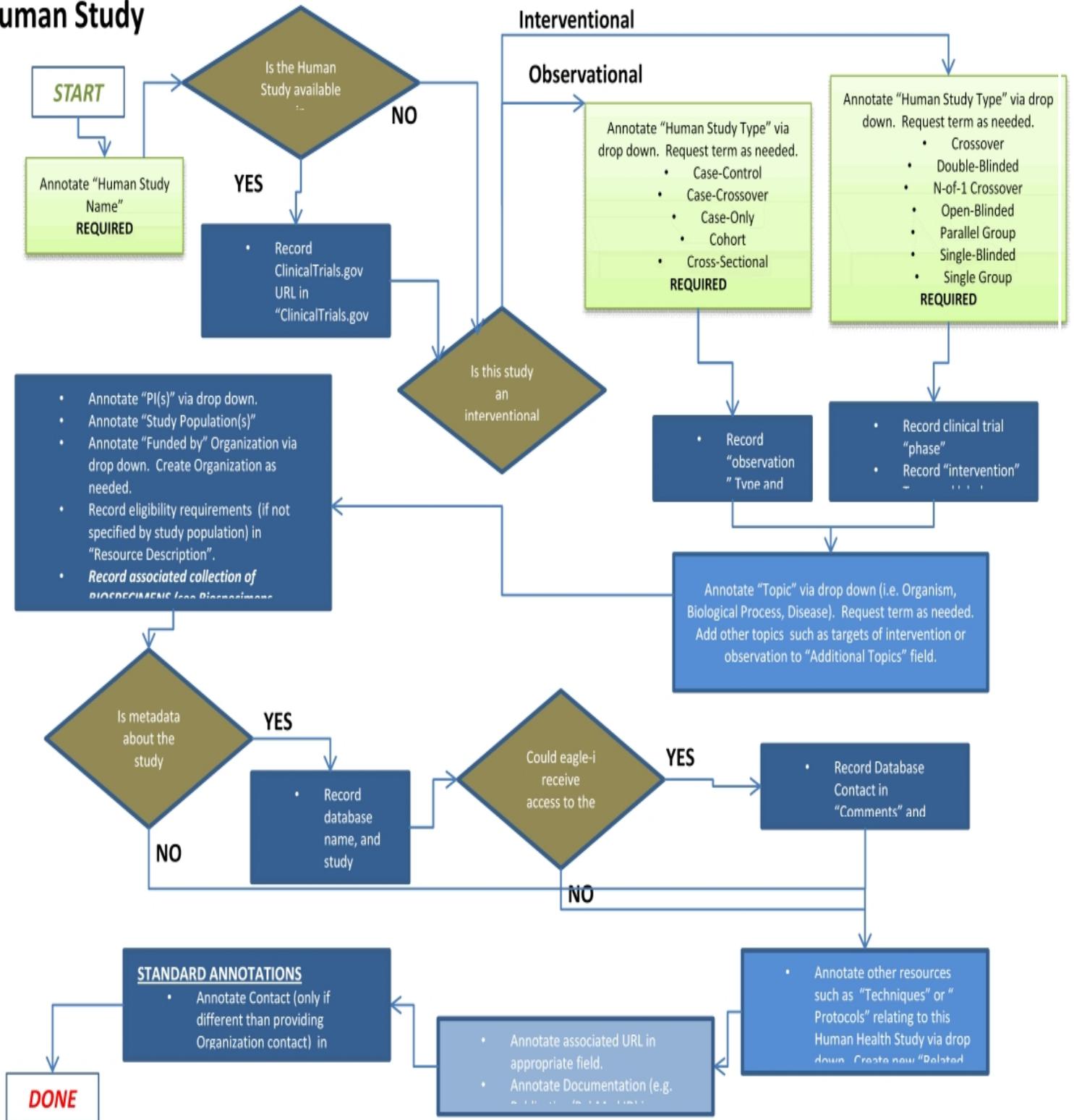
ClinicalTrials.gov Studies

Many human studies have a ClinicalTrials.gov (CT.gov) record. ClinicalTrials.gov is a large federal repository that contains information regarding planned, ongoing, and concluded human studies. Its name is somewhat of a misnomer in that it includes meta-data for human studies with any research design, not just clinical trials per se.

If the study you are annotating already has a CT.gov record, it would be helpful know before you start recording information, for two reasons:

1. Some CT.gov records have already been imported into the eagle-i repository. If your study already has a CT.gov record, it may also already have an eagle-i record. Working with that imported record will save you the time of re-recording information, and ensure that there is no duplication of resource records within eagle-i.
2. Even if there is no pre-populated eagle-i record for the study, if it has a CT.gov record, the information it contains may be helpful in filling in the data you need to record. Go to <http://clinicaltrials.gov/> and click “Search for clinical trials” to determine if a record exists.

Human Study



Human Study Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Human Study Name	The official name of the study. In the absence of a formal name, it is acceptable to use the title of a journal article or other publication reporting on the study as the study name as long as: 1) the article title does not refer to itself as a publication, which would then not make sense in the human study context 2) the article title is specific enough to distinguish the specific study being annotated from others, which may be related or associated with the same organization or project.	Yes	✓
Human Study Type	The study type as defined by its research design. The goal of annotation in this field is to select the most specific study type that is relevant. Use the eagle-i glossary or consult the Observational Studies chart to see definitions of the study types, and select the sub-type that most closely describes the study from the drop-down list. If no study type accurately matches the characteristics of the study you are trying to annotate, submit a term request for it in the adjacent "term request" box. Note on Epidemiological studies: these are statistical studies on human populations, which attempt to link human health effects to a specified cause. An epidemiological study can only prove that an agent could have caused, but not that it did cause, an effect in any particular case.	Yes	✓
Human Study Description	A short, typically one paragraph description of the study to serve as an overview, with particular emphasis on the goals of the research or aspects not recorded in any other field. Some annotators have used the abstract of a journal article describing the study as the description. This is acceptable, and is particularly useful to the reader if it is a structured abstract, as long as the abstract comes from a source that is not copyrighted, such as PubMed. The CT.gov record for the study may also provide information.		
Human Study Additional Name	Any other name for the study: For example, the Third National Health and Nutrition Examination Survey is often called "NHANES 3".		
Performed by	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	The person who serves as primary contact for information about the study and its associated resources. This may or may not be the same as the Principal Investigator. NOTE: Not needed if the same as the providing organization contact.		
PI (Principal Investigator)	The lead scientist supervising the study and primarily responsibility for its outcome. Select the appropriate person from the list. If the person is not primarily affiliated with the "performed by" organization, click "See choices from all organizations" and select the person from that list. Use the PI (co-Investigator) field to note any co- or secondary PIs, if applicable.		
PI (co-Investigator)	Identifies the names of any co-Principle Investigators (co-PIs) supervising the study and primarily responsibility for its outcome. This field should be filled separately, even if the Contact and the co-PI is the same person. This field should be used to distinguish the primary PI from any co- or secondary PIs. Enter in the format: Last Name, First Name, Degree, if it is available. Add as many as needed.		
<u>Intervention</u>	This box only displays if you have selected an interventional study type in the Study Type field. Click the square blue box to display two required fields: Name and Type.	Yes	

Observational Method	This box only displays if you have selected an observational type in the Study Type field. Click the rectangular blue box to display two required fields: Name and Type.	Yes	
Access Restriction (s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Topic	Use these two fields to record the topic or topics being studied. The first field, Topic, is tied to the eagle-i ontology, and the second, Additional Topics is used to record other topics not in the ontology. For more information, see Using the Topic Field .		
Additional Topic	Topics are likely represented conceptually in the study description you have already created. If the study has a ClinicalTrials.gov record, the Medical Subject Headings (MeSH) which appear in the CT.gov record may also provide insight into the topics covered.		
Phase	<p>This field will only appear if you have selected "Clinical trial" as the study type.</p> <p>Clinical trial phases are defined by the U.S. Food and Drug Administration. Studies with formally numbered and reported phases are typically clinical trials. For example, "Phase 2 randomized trial."</p> <p>The following selections appear in the drop-down list:</p> <p>Phase 0 trials—Very limited human exposure, with no therapeutic or diagnostic intent (e.g., screening study, microdose study)</p> <p>InPhase I trials—Researchers test an experimental drug or treatment in a small group of people (20-80) for the first time to evaluate its safety, determine a safe dosage range, and identify side effects.</p> <p>InPhase II trials—Experimental study drug or treatment is given to a larger group of people (100-300) to see if it is effective and to further evaluate its safety.</p> <p>InPhase III trials—Experimental study drug or treatment is given to a larger group of people (100-300) to see if it is effective and to further evaluate its safety</p> <p>InPhase IV trials—Post marketing studies produce additional information including the documented risks, benefits, and optimal use of an approved therapy.</p> <p>For combined trial phases such as "Phase I/II trials" and "Phase II/III trials", use the + to select multiple phases.</p>		
Biological Specimen	If the study involves the use of biological specimens, select the appropriate specimen from the list. If the specimen is not associated with the "performed by" organization, click "See choices from all organizations" and select the specimen from that list.		
ClinicalTrials.gov URL	Record the URL for the study record in the ClinicalTrials.gov repository.		
Funded by	Organization(s) providing funding for the study.		
Related Cell Line	Cell lines related to the study.		
Related grant number	Grant number for the funding that contributed to the development of the study. For example: 'U24 RR 029825'.		
Related protocol(s)	This field is for the protocol used to perform the human study.		
Related Publication or Documentation	Refers to any journal articles or patents that contain resource information. Although Protocols are considered a type of document, they should be referenced in the Related Protocol (s) field only, not in this field. In addition, for the purpose of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		

Study Population	Enter a summary phrase or two regarding the general characteristics of the study population, for example, "3000 lung cancer patients between the ages of 50 and 60 years of age." Do not copy in the complete text of the ClinicalTrials.gov eligibility criteria or lengthy descriptions from protocols or similar sources.		
Website(s)	Determine whether the study itself has a website and if so, enter it here. Do not enter a link to a ClinicalTrials.gov page, as that should have been recorded in the ClinicalTrials.gov URL field above. Do not enter a link to a PubMed record related to the study. That information should be part of a publication record, which may then be linked to the study if appropriate.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Using the Topic Field

The topic field is tied to the eagle-i ontology, and should only be used to record study topics that are diseases, biological processes, or organisms or viruses. All other topics should be added to the record using the Additional Topic(s) field discussed below. You can search for topics two ways:

1. Select **biological process, disease, or organism or virus** from the drop-down list.

2. Type the topic in the text box. If necessary, use synonyms, word roots, and alternative punctuation forms to find topics. For example, if you cannot find it under "lung", try "pneumo-", "airway", "bronch-", "respiratory", and "breath—" terms; if "Nail-Patella Syndrome" doesn't work, try "Nail Patella Syndrome."

The screenshot shows a form with several fields and a dropdown menu. The 'Topic' field is set to 'Biological process'. A dropdown menu is open, showing a list of biological processes. The 'single-organism cellular process' option is highlighted. Other options include '<none>', 'Biological regulation', 'Cellular process', 'Developmental process', 'Establishment of localization', 'Immune system process', 'Locomotion', 'Metabolic process', 'Multi-organism process', 'Multicellular organismal process', 'Reproduction', 'Reproductive process', 'Response to stimulus', and 'single-organism process'. The form also includes fields for 'Additional Topic(s)', 'Biological Specimen', 'ClinicalTrials.gov url', 'Funded by', and 'Related Cell Line', each with a refresh and add button.

When the topic is not in the ontology

To build the ontology to meet user needs, it is important for annotators to communicate what ontology concepts are required. If the needed topic term is a disease, biological process, or organism/virus, select the appropriate parent term in the drop-down list and request the new term. See [Submitting Term Requests](#) for more information.

Using the additional topic(s) field

This field is used to record any other topics related to the study where the topic is not a disease, biological process, or an organism/virus. This is a free text field. Record only one topic in the box. Click + to add additional boxes and topics.

Table of Study Types

Study Type	Synonyms	ClinicalTrials.gov Definition	Ontology of Clinical Research (OCRe) Definition
Interventional study	Experimental study	Studies in human beings in which individuals are assigned by an investigator based on a protocol to receive specific interventions. Subjects may receive diagnostic, therapeutic or other types of interventions. The assignment of the intervention may or may not be random. The individuals are then followed and biomedical and/or health outcomes are assessed.	An interventional study is a quantitative study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes. Interventions include but are not restricted to drugs, cells and other biological products, surgical procedures, radiologic procedures, devices, behavioral

			treatments, process-of-care changes, preventive care, etc. [adapted from: WHO, available at: http://www.who.int/ictcp/en/]
(Interventional) Single group study		A single arm study.	OCRe: A single group study is an interventional study that has only a single allocation group and no contemporaneous comparison group. A study in which an individual acts has his/her own comparison does not fall into this category, since an individual is not a group.
(Interventional) Parallel study		CTs.gov: participants are assigned to one of two or more groups in parallel for the duration of the study	OCRe: A parallel group study is an interventional study that compares across at least two allocation groups concurrently, each receiving a regimen of interventions (which can be "no intervention").
(Interventional) Cross-over study		CTs.gov: Cross-over: participants receive one of two alternative interventions during the initial phase of the study and receive the other intervention during the second phase of the study.	OCRe: A crossover study is an interventional study where the population is more than a single human subject, in which at least two regimens of interventions are given alternately. Upon completion of one regimen, participants are switched to the other. For example, for a comparison of regimens A and B, the participants are randomly allocated to receive them in either the order A, B or the order B, A. Regimens are assigned to and data are analyzed within more than one participant at a time.
(Interventional) Factorial study	Factorial design	CTs.gov: Factorial: two or more interventions, each alone and in combination, are evaluated in parallel against a control group.	OCRe: Factorial design is a trial design used to assess the individual contribution of treatments given in combination, as well as any interactive effect they may have... In a trial using a 2x2 factorial design, participants are allocated to one of four possible combinations... This type of study is usually carried out in circumstances where no interaction is likely.
(Interventional) N-of-1 study	Single patient trial	CTs.gov: no equivalent class.	OCRe: An N-of-1 crossover study is an interventional study where the population is a single human subject and in which at least two regimens of interventions are given alternately. Regimens are assigned to and data are

			analyzed within one participant at a time.
(Interventional) Quasi-experimental study	quasi-experiment; quasi-random allocation	CTs.gov: no equivalent class.	OCRe: Quasi-random allocation is an allocation scheme that is not random, but is intended to produce similar groups when used to allocate participants. Quasi-random methods include: allocation by the person's date of birth, by the day of the week or month of the year, by a person's medical record number, or just allocating every alternate person. In practice, these methods of allocation are relatively easy to manipulate, introducing selection bias.
Observational study	Non-experimental study	Studies in human beings in which biomedical and/or health outcomes are assessed in pre-defined groups of individuals. Subjects in the study may receive diagnostic, therapeutic, or other interventions, but the investigator does not assign specific interventions to the subjects of the study.	An observational study is a quantitative study in which the investigators do not seek to intervene, and simply observe the course of events. [adapted from: Glossary of Terms in The Cochrane Collaboration]
(Observational) Cohort study	Concurrent study Concurrent cohort study Follow-up study Incidence study Longitudinal study Panel study Prospective study	CTs.gov: Cohort: group of individuals, initially defined and composed, with common characteristics (e.g., condition, birth year), who are examined or traced over a given time period.	OCRe: A cohort study is an observational study in which a defined group of people (the cohort) is followed over time. The outcomes of people in subsets of this cohort are compared, to examine people who were exposed or not exposed (or exposed at different levels) to a particular intervention or other factor of interest. A prospective cohort study assembles participants and follows them into the future. A retrospective (or historical) cohort study identifies subjects from past records and follows them from the time of those records to the present. [Glossary of Terms in The Cochrane Collaboration]
(Observational) Non-concurrent cohort study	Non-concurrent prospective study Retrospective cohort study Historical cohort study Historical prospective study		

(Observational) Case-control study	Case-referent study Retrospective study	CTs.gov: Case-control: group of individuals with specific characteristics (e.g., conditions or exposures) compared to group(s) with different characteristics, but otherwise similar.	OCRe: A case control study is an observational study that compares people with a specific disease or outcome of interest (cases) to people from the same population without that disease or outcome (controls), and which seeks to find associations between the outcome and prior exposure to particular risk factors. [Glossary of Terms in The Cochrane Collaboration]
(Observational) Case-only study		CTs.gov: Case-only: single group of individuals with specific characteristics.	OCRe: no equivalent class.
(Observational) Case-crossover study		CTs.gov: Case-crossover: characteristics of case immediately prior to disease onset (sometimes called the hazard period) compared to characteristics of same case at a prior time (i.e., control period).	OCRe: A case-crossover study is an observational study that aims to answer the question, "Was this event triggered by something unusual that happened just before?" The key feature of the design is each case serves as its own control. The method is analogous to a crossover experiment viewed retrospectively, except the investigator does not control when a patient starts and stops being exposed to the potential trigger. Also, the exposure frequency is typically measured in only a sample of the total time when the patient was at risk of the injury or disease onset. Thus it usually resembles a case-control study more than a retrospective cohort study. The simplest case-crossover design is closely analogous to a traditional matched-pair case-control design. In both, each case has a matched control. In a traditional matched-pair case-control study, the control is a different person at a similar time. In the matched-pair case-crossover design, the control is the same person at a different time [Annu Rev Public Health. 2000;21:193-221.]
(Observational) Cross sectional	Disease-frequency survey Prevalence study Survey	CTs.gov: no equivalent class.	OCRe: A cross-sectional study is an observational study measuring the distribution of some characteristic(s) in a population at a particular point in time. (Also called survey.) [adapted from: Glossary of Terms in The Cochrane Collaboration]

Ecologic or community studies	Ecological study	Geographically defined populations, such as countries or regions within a country, compared on a variety of environmental (e.g., air pollution intensity, hours of sunlight) and/or global measures not reducible to individual level characteristics (e.g., health care system, laws or policies median income, average fat intake, disease rate)	OCRe: An ecologic study is a non individual-human study in which the unit of observation is a population or community.
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Instruments Introduction and Workflow

Instruments are devices that have a mechanical, measurement, or electronic function. Instrument accessories that are part of a particular workstation should only be recorded as separate records if they meet the definition of instrument, in other words, if they perform a specific function, such as mechanical, measurement, or electronic functions; slides, for example, would not be a separate instance, but a photomultiplier would be.

Creating Instrument Records

Watch [this video tutorial](#) for a demonstration of how to create instrument records in the SWEET.

Only a single record should be used to represent multiple copies of the same instrument in a single laboratory; indicate the number of instruments available in the Instrument Description field. However, duplicate copies of the same instrument located in *different* laboratories should be represented by separate records.

Note: There is currently no automatic way to record relationships between instruments that are parts of other instruments (in other words, an *objective* is part of a *microscope*).

To manually describe parts of a workstation:

1. Create a stub record for the workstation, typed as whichever type of instrument corresponds to the main component.
2. In the Instrument Description field, include a list of specifically relevant parts or important components that might be queried on.
3. Each of those components should also be recorded in a separate record, with the workstation name included in the **Instrument Description** field.

As instruments are commonly linked to from other types of records, particularly services and software, it is often easiest to create instrument records first.

Instruments Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Instrument Name	Enter any local designation commonly used to refer to the instrument, such as: "96-well plate in storage area." Wherever possible, use manufacturer/model information to distinguish generic instrument labels. The instrument name should be more specific than the type.	Yes	✓
Instrument Type	Select the most specific term that accurately represents the instrument type. If there is no specific term that is accurate, select the next broader term that is accurate. For example, if "scanning electron microscope" is not a choice, select the next most broad term, "electron microscope," and then request the term "scanning electron microscope." See Submitting Term Requests for more information.	Yes	✓
Instrument Description	Enter any information that describes the instrument but is not captured in any of the other fields, including information about workstation components and the number of copies of an instrument the lab owns.		
Instrument Additional Name	Alternate instrument name. This field includes abbreviations or alternate spellings for the resource, for example, "qPCR" for a real-time		
Location	This is a read-only field that is pre-populated with the name of the organization where the instrument is located. In some cases, multiple labs may share a single instrument.		✓
Contact	Name of the primary person responsible for the instrument. Not needed if the same as the providing organization contact.		
Related Technique	Method related to or performed using the instrument. Should not include any technique used to generate the resource. May include a term request.		
Access Restriction(s)	Should contain any restrictions on instrument availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Manufacturer	Name of the organization that created the instrument. May also be a person, but only if the person mass produces the instrument. Use the Developed by field for instruments not designed for mass production. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Developed by	Name of any people or organizations who designed or helped develop the instrument for limited or internal use only. If the instrument was developed for commercial mass production, the manufacturer field should be used instead.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the instrument.		
Inventory Number	The inventory identifier for the instrument. For insurance and control purposes, many institutions have an internal inventory number associated with each piece of equipment. This may be available via university records or is often recorded on a plate attached to the device itself. Note: if a lab contains multiple copies of the same instrument that differ only by inventory number, the numbers should all be included in the same record (by creating new fields with		

	the + button), and other duplicate records should be deleted.		
Model Number	Should contain the instrument model number. Can be a name, number, or combination of both. If this model information has been included in the Instrument Name but not the Model Number field, then you should copy it into the Model Number field, but also leave it in the label, as long as it makes sense to do so.		
Related grant number	Grant number for the funding that contributed to the development of the instrument. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to journal articles or patents that contain instrument information. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Related Software	Software that is used to run the instrument or specifically analyze the data output from the instrument.		
Website(s)	The web address or addresses pertaining to the resource, if applicable. If applicable, you can add a link to the manufacturer's web page for that instrument. Web page URLs should be in the format <code>http://<lab name></code> or <code>https://<lab name></code> . If the <code>http://</code> or <code>https://</code> is not included, the link will not work. The simplest form of the address should always be used.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Organism and Viruses Introduction and Workflow

Organisms and *viruses* are living systems that are capable of replicating or reproducing in the right environment. Examples: *animal, plant, bacteria, fungus* or *virus*.

Sometimes people confuse biological specimens with organisms: For example, insect specimens at a museum would be considered biological specimens, not organisms. But trees in an arboretum would be considered organisms. Currently, eagle-i distinguishes these two based first on whether or not the entity is alive. If it is alive, it is not a biological specimen. If it is dead, the most critical information is what species and what anatomical structure the specimen is derived from.

Selecting either an organism or a virus in the Organisms and Viruses Type field determines which fields display in the main body of the record. Therefore, it is necessary that this field be annotated correctly before entering or editing new records.

Creating Organism Records

Watch [this video tutorial](#) for a demonstration of how to create organism records in the SWEET.

About Model Organisms

eagle-i collects information on organisms that have genetic or epigenetic modifications that allow them to be used as proxies for human diseases. These models are designed to mimic physiological and/or pathological processes that are thought to be central to the pathogenesis of human disease. They help translational and pre-clinical investigators perform unlimited genetic, biochemical, physiological and interventional experimentation that would not be possible in humans. When reflective of a human disease process, organisms are critical reagents for the development of new therapeutics. However, model organisms relevant to human disease can be very difficult to find if they are not published and/or are not described in sufficient detail.

Model Organisms vs. Generic Organisms

There are two broad types of organism records in eagle-i, those that refer to a specific model organism within an actual laboratory, and those that refer to generic types of organisms with no associated laboratory, i.e., just "mouse". The majority of the guidelines in this section are applicable only to model organism records. Generic organism records have far fewer requirements, and for workflow purposes, should ideally be created and published first for each institution.

Referenced generic organism records are used when it is necessary to reference an organism, such as a mouse, which the laboratory itself does not contain. For instance, a biospecimen record must include the organism from which the specimen was derived, but in some cases, that organism will not be a part of the laboratory's resources. In cases like that, the Derives from Organism field should be filled with a link to a referenced generic organism record.

Referenced organisms of generic type should be associated with—and only with—the placeholder record called "Generic Lab" which has been created at each institution. Do not publish the Generic Lab; please leave it in curation so it does not appear in search results.

To create a referenced generic organism type record, you need only enter data in two fields: label and type. The label should be exactly the same as the type, for example, label "Mus musculus" of type Mus musculus. Note: It may be possible for a single institution to contain more than one organism record with the same label, one the generic type and one (or more) referring to specific resources available for sharing within that institution's labs.

Super/subscripts

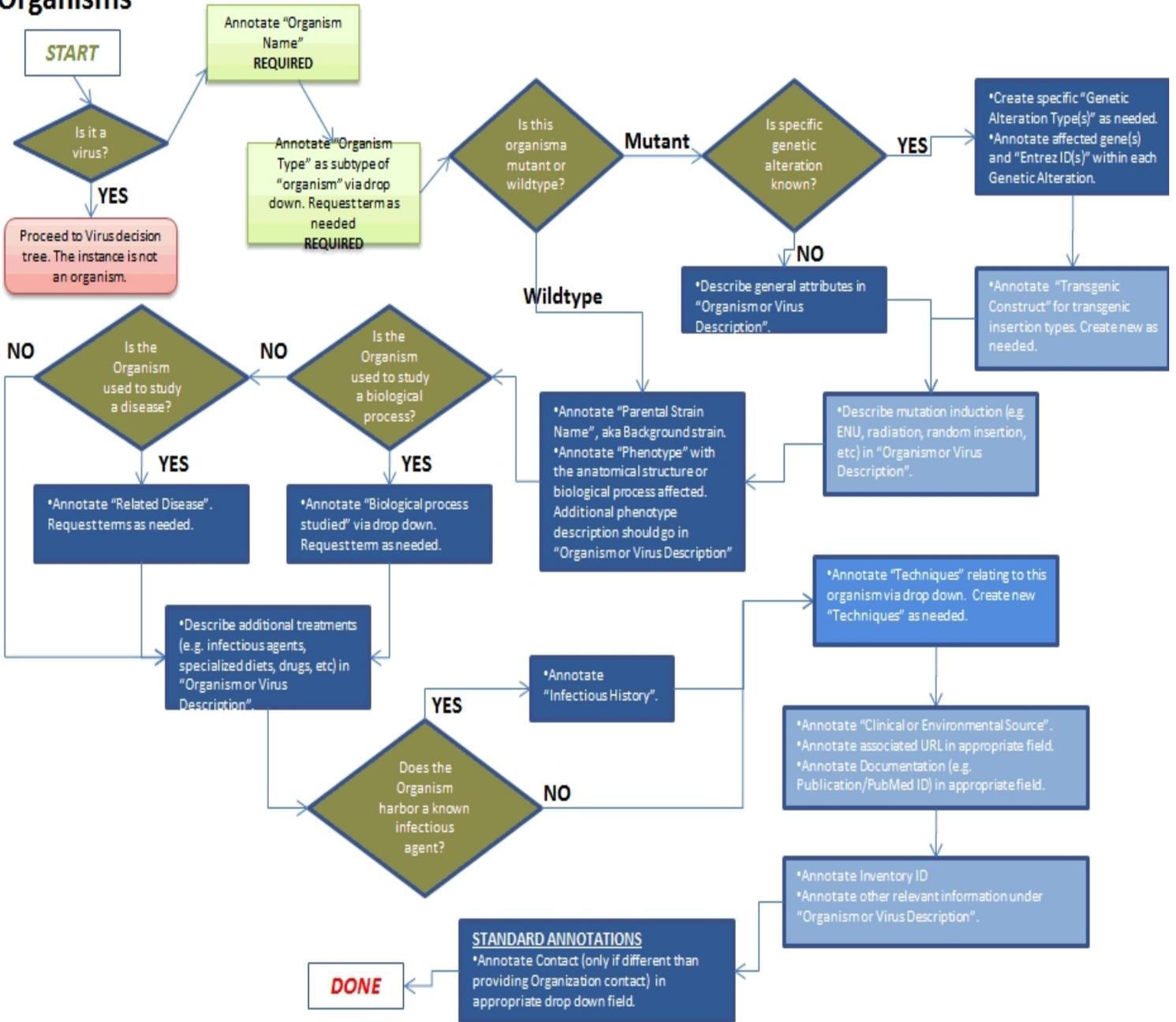
Super- and subscripts may be represented using either brackets or HTML :

- Superscripts may be indicated using square brackets around the text. For example, for allele names: *agil*^{2J} would be entered as *agil*[2J].
- Both super- and subscripts can also be represented using the HTML tags <sup> and <sub>. In particular, these tags should be used for resources for which the addition of extra brackets might be misleading. For example: the chemical compound [¹¹C]CH₃I (methyl iodide) would be entered as [¹¹C]CH₃I. In these cases, in order to ensure the resource will still come up in search results, a version of the name without the HTML tags should also be entered in the Additional Name field.

Available Guidelines for Organism and Virus Records

- [Decision Tree for entering Organism records](#)
- [Decision Tree for entering Virus records](#)
- [Annotation Guidelines for Organism records](#)
- [Annotation Guidelines for Virus records](#)

Organisms



Organisms Field Annotation

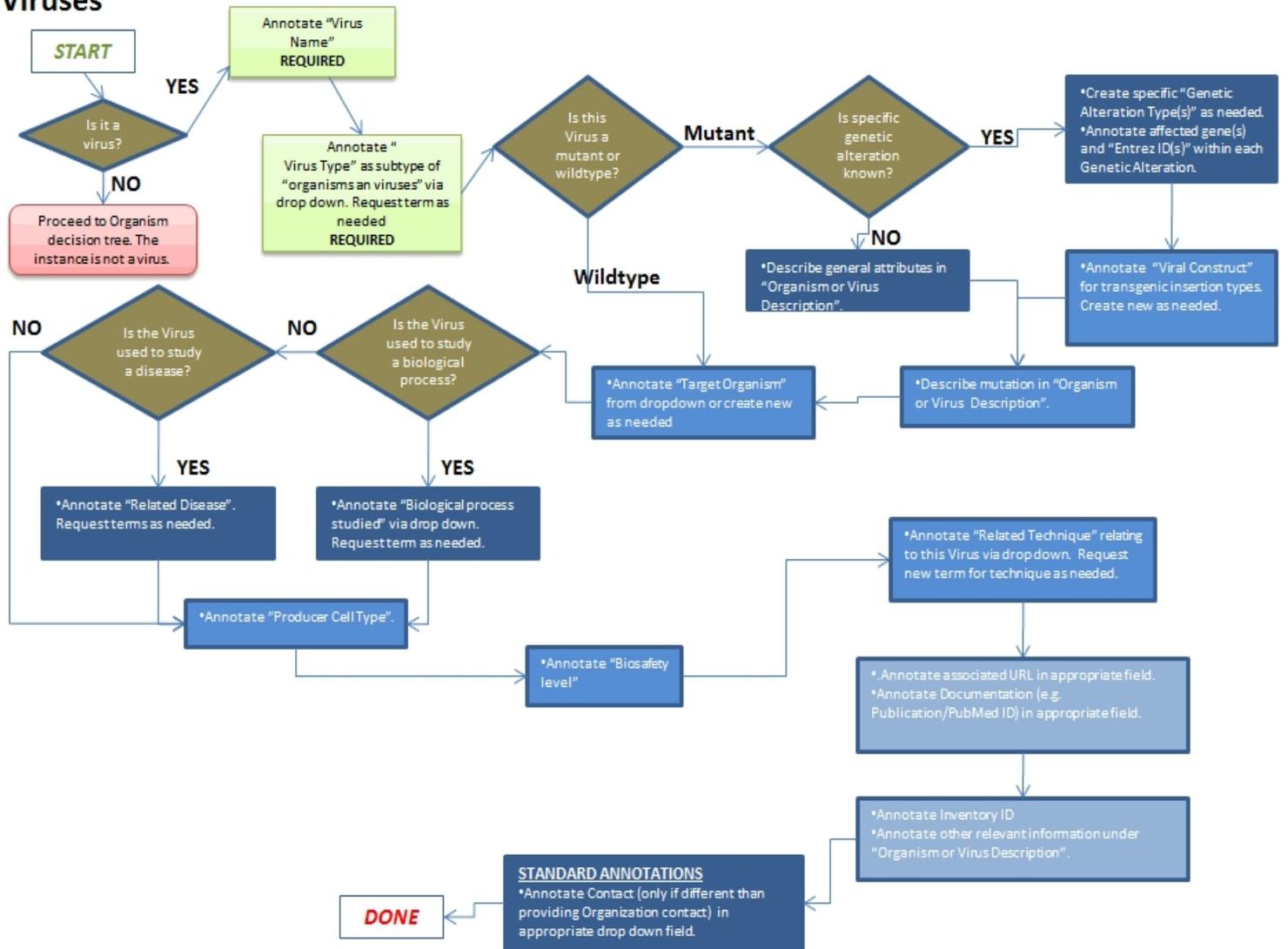
Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Organism Name	<p>Enter a label for the organism. The label may contain genotype information (following common nomenclature), but it does not need to.</p> <p>If the label contains genotype information and there is no corresponding genetic alteration/mutation type added to the record, then you should create one. If you cannot determine how to represent this, then it should be forwarded to the responsible data contributor. If the name does not contain genotype information, the label should be the Latin (binomial) name of the organism. The common (layman's) name can be added in the "Additional name" field.</p>	Yes	✓
Organism Type	The most specific organism type or taxon should be selected from the ontology.	Yes	✓
Organism or Virus Description	<p>Should include any information that describes the organism or virus but is not captured in any of the other fields, such as how the mutant was generated. Some helpful definitions:</p> <ul style="list-style-type: none"> ■ Wildtype: Refers to the phenotype of the typical form of a species as it occurs in nature. ■ Mutant: An organism that has characteristics resulting from chromosomal alteration. ■ Engineered: A mutation that was engineered using recombinant DNA technology. For example: knockout mouse would include inducible knockout or knockin mice. ■ Induced: A mutation that is induced by administration of a mutagenic reagent. For example: induction of mutations in mice with ENU. <p>"Additional treatments" are a high value item, but if omitted it is not necessary to send the record back to the original data contributor.</p>	Yes	✓
Organism or Virus Additional Name	Any alternate organism name or names. Should include any abbreviations or alternate spellings for the resource. Use this for any genotype names that may be commonly used but do not conform to official nomenclature guidelines: For example, the zebrafish mutant <i>fgf8a</i> [ti282] was originally published as "acerebellar" with the abbreviation "ace"; the former should be used in the Resource Name and the latter listed as an Additional Name.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		
Contact	Name of the primary person responsible for the resource. Not needed if the same as the providing organization contact.		
<u>Genetic Alteration</u>	<p>High Value field. Enter a genetic alteration label and type. This is required even if the genetic alteration type is unknown; annotate up. If the gene and organism are known, enter the Entrez ID of the affected/mutated gene (http://www.ncbi.nlm.nih.gov/gene).</p> <p>If multiple genes are affected, make sure there is a separate Genetic Alteration listed for each one.</p> <p>See also: Gene and Protein Symbol Conventions.</p>		
Related Technique	Method related to or performed using the resource. Should not include any technique		

	used to generate the resource. May include a term request, which is only visible in the Information for Data Curators section at the very bottom of the record.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Biological Process Studied	High value field. The biological process that is used to study the organism.		
Clinical or Environmental Source	The organism's source environment or clinical setting. Examples: clinical isolates, animals captured in wild vs. lab-reared. Can also include geographical origin, such as USA or Japan.		
Developed by	Name of any organizations or people who developed or helped develop the organism.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the organism.		
Infectious History	The infectious history of the organism, such as previous viral infections that may affect the usage of the organism for research. Should not include normal health reporting. Example: <i>Animal has been exposed to parvo virus.</i> Note: although the record can be published without it, this is a high priority field		
Inventory Number	The inventory identifier for the resource. Typically, this will correspond to the lab's inventory system, in which case, the default format should simply be the number, in whatever format used by the lab. For commercial resources, this field may also include commercial catalog number. These external inventory numbers should be distinguished from internal lab inventory numbers by including the name of the company, following by a colon, and then the number.		
Parental Strain Name	High value field. Enter the parental strain name of modified organisms. The level of detail given to the background is at the discretion of the researcher; if the field is not filled in at all, that's a flag. Multiple strains, if important enough to capture, should be entered on multiple fields, which are accessible using the UI's "+" sign. Use approved nomenclature where applicable. See http://en.wikipedia.org/wiki/Gene_nomenclature for more details.		
<u>Phenotype annotation</u>	Captures all observable characteristics or traits of an organism, such as its morphology (e.g. small eye), development, biochemical or physiological properties, behavior, and products of behavior (such as a bird's nest). The phenotype is more atomic than syndrome or disease.		
Related Disease	High Value field. The disease in which the organism manifests, or the disease of which the organism is a representation. If at all possible, organism records that are not global instances should include either the Biological Process Studied or a Related Disease, or both. In the absence of either of these fields, the record should be promoted to the relevant domain expert for review. Possible exceptions include: intrinsically rare wildtype organisms, e.g. primates.		
Related grant number	Grant number for the funding that contributed to the development of the organism. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to and protocols, journal articles, or patents that contain information about the organism. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Transgenic Construct	Refers to a construct that has been introduced into the genome of an organism. If there is a related construct used to generate the transgenic organism, it should be created with		

	<p>the relevant insert gene symbol and EntrezID and related using this property.</p> <p>Also use the construct in this field to capture the insertion name, if there is one, such as Cre recombinase or GFP, no need to provide Entrez Gene ID. Cre should be annotated as Cre recombinase (not just Cre). If there are questions about annotations of specific genes, please ask the original data contributor. See Guidelines for Constructs for more information.</p>		
Website(s)	The web address or addresses pertaining to the organism or virus, if applicable. For example, if a mouse is available for sale at JAX, the URL page for that mouse.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Viruses



Viruses Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Virus Name	Enter a label for the virus.	Yes	✓
Virus Type	The most specific virus type or taxon should be selected from the ontology.	Yes	✓
Organism or Virus Description	<p>Should include any information that describes the virus but is not captured in any of the other fields. One that can be specifically included here is how the mutants was generated. Some helpful definitions:</p> <ul style="list-style-type: none"> ■ Wildtype: Refers to the phenotype of the typical form of the virus as it occurs in nature. ■ Mutant: A virus that has characteristics resulting from chromosomal alteration. ■ Engineered: A mutation that was engineered using recombinant DNA technology. ■ Induced: A mutation that is induced by administration of a mutagenic reagent. <p>"Additional treatments" are a high value item, but if omitted it is not necessary to send this back to the original data contributor.</p>	Yes	
Organism or Virus Additional Name	Any alternate virus name(s). Should include any abbreviations or alternate spellings for the resource. Use this for any genotype names that may be commonly used but do not conform to official nomenclature guidelines.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		
Contact	Name of the primary person responsible for the resource. Not needed if the same as the providing organization contact. Should be entered in the name format: <i>Last name, First name</i> . Contact and PI may be the same person.		
<u>Genetic Alteration</u>	<p>High Value field Enter a genetic alteration label and type (This is required even if the genetic alteration type is unknown, annotate up). If the gene and organism are known, enter the Entrez ID of the affected/mutated gene (http://www.ncbi.nlm.nih.gov/gene). If multiple genes are affected, make sure there is a separate Genetic Alteration listed for each one.</p> <p>For gene symbols see Gene and Protein Symbol Conventions.</p>		
Related Technique	Method related to or performed using the resource. Should not include any technique used to generate the resource.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be		

	entered on separate lines.		
Biosafety Level	The level of the biocontainment precautions required to isolate dangerous biological agents in an enclosed facility. The levels of containment range from the lowest biosafety level 1 to the highest at level 4.		
Developed by	Name of any people who developed or helped develop the organism.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the virus.		
Inventory Number	The inventory identifier for the resource. Typically, this will correspond to the lab's inventory system, in which case, the default format should simply be the number, in whatever format used by the lab. For commercial resources, this field may also include commercial catalog number. These external inventory numbers should be distinguished from internal lab inventory numbers by including the name of the company, following by a colon, and then the number.		
Producer Cell Type	Enter the kind of cell in which the virus may be produced, for example, 293T.		
Related disease	The disease in which the virus manifests, or the disease of which the virus is a representation.		
Related grant number	Grant number for the funding that contributed to the development of the virus. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to and protocols, journal articles, or patents that contain information about the virus. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Target Organism	Enter the organism that the virus infects.		
Transgenic Construct	Refers to a construct that has been introduced into the genome of an organism. See guidelines for constructs .		
Viral Construct	Enter the construct that is used to generate active virus.		
Website(s)	The web address or addresses pertaining to the virus, if applicable. For example, if a virus is available for sale from a commercial vendor.		
Comments	This field is not visible in search. Resource Navigators should use this field for notes to themselves about the record or to record comments intended for the curators. Possible uses include explanations for missing information in the record, or other notes about the annotation process. Not to be used for annotation purposes.		✓
Curator Note	This field is not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections (typos, capitalization, migrating info to a different field, etc.), any major changes to the record should be documented along with the name or initials of the curator who made them. Outstanding term requests in published records should be indicated with the phrase: "curation status incomplete: need xxx" (where xxx = the type of term requested, i.e. instrument, technique, biological process, etc.). This phrase should be removed when the term request is filled. Other comments regarding changes should be kept for posterity.		✓

Documents and Protocols Introduction and Workflow

eagle-i collects information about physical or electronically formatted documents in the form of protocols, journal articles, and patents.

Note: eagle-i does not store the actual documents themselves; it merely stores metadata about the documents.

Document records may reference and/or be closely related to other resource types, such as techniques, instruments, or human studies, and it is important to keep the differences in mind when annotating documents. There could be a similar name for a technique, an instrument and a document. For example, a protocol for chromatography is a documented plan; it is not the same as chromatography per se, which is a technique. In the same way, a publication reporting on a human study is a document that describes the study. The study will therefore have its own separate record which may have multiple publications associated with it. A document is always a written text that can be referenced either as a physical document or at a URL.

If the actual document is available at an external website, the URL should be included in the record. If the document is not electronically available, but is otherwise valuable, it should still be included in eagle-i. However, it is particularly important to provide a descriptive label, extensive resource description and/or related resources types (techniques, organisms, etc.) for such documents in order to facilitate their identification in the search application.

Protocols

Scientific protocols are detailed plan specifications designed to allow experts to independently reproduce that process. They are often not widely communicated, shared, or available electronically. Therefore, fostering the sharing of protocols is an especially valuable eagle-i service to the scientific community. The exception is commercial protocols, which are not generally considered to be within scope for eagle-i, as they are neither invisible nor rare.

Adding Documents

Protocols are the most common type of document collected in eagle-i, and the only type of document listed on the organizations sidebar in the SWEET. You can add new records for other types of documents from within other resource records. For example, to add a record for a journal article related to an organism:

1. Open the organism record.
2. Select <create new> from the **Related Publication or Documentation** field.
3. Select the "journal article" sub-type and enter the article title.
4. After saving the organism record, open the journal article record and fill in additional information, such as the PubMed ID.

You can also add new document records by clicking the **add new** protocol link on the sidebar of an owning organization. The Document Type field will automatically populate with the type: "protocol". Select another type of document instead. Be sure to do this before filling out any other fields in the record, as the fields will change depending on the type selected. After, complete and save the record as you normally would.

Documents and Protocols Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Document Name	This is the protocol or document title, for example, "DNA extraction from blood protocol." Capitalize the first word of the name, with all following words lower case with the exception of proper nouns. For protocols, add the word "protocol" to the end of the document name where it makes lexical sense. This will help to distinguish them from techniques of the same name in some display contexts.	Yes	✓
Document Type	The document selected in the Document Type field determines which fields display in the main body of the record and what information will be annotated. Document Types are: 1) Protocol: a plan specification which has sufficient level of detail and quantitative information to communicate it between domain experts, so that different domain experts will reliably be able to independently reproduce the process. 2) Journal Article: a document that has been accepted by a publisher. 3) Patent: A document describing the exclusive right granted by a government to an inventor to manufacture, use, or sell an invention for a certain number of years.	Yes	✓
Document Description	Enter descriptive information not captured in any of the other fields, for example, a brief abstract of the journal article, a description of the protocol or report contents, or the SOP (Standard Operating Procedure) number or any other standardized tracking number, such as a patent number. For protocols, do not include the actual step-by-step test of the protocol itself. Put separate or unrelated pieces of information in separate paragraphs.		
Document Additional Name	Enter any alternate resource name, including commonly abbreviated names or alternate spelling for the resource name.		
Used by	Name of the owning organization. Pre-populated, read-only field. (Protocols only.)		
Author	For protocols and patents: select the author from the drop-down list. Annotate additional authors by adding an additional author field. Click + to add an additional field. If the protocol author is not a member of the lab through which the protocol is shared, click "See choices from all organizations" and select the author from the larger list. For journal articles: at present this field may be left blank for publications that have a PMID ID (see below), as the authors will eventually be pulled from PubMed.		
Contact	Enter the name of the primary person responsible for the resource. Select the person's name from the drop-down list.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Topic	Protocols only. Link to related biological, processes, diseases, or organisms/viruses.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the document.		
Related grant number	Grant number for the funding that contributed to the development of the document. For example: 'U24 RR 029825'.		
Related Pub-	Link to any documents that are associated with this one. For the purposes of annotation, websites		

lication or Documentation	are not considered documents and should be entered into the Website(s) field instead.		
Uses	Protocols only. Link to any Instrument, Organism or Virus, Reagent, Software, or Technique that are referenced in the protocol. Include as many as are applicable.		
PubMed ID (PMID)	Journal articles only. Annotate the full URL of the PubMed record, which will include the PMID. For example: http://www.ncbi.nlm.nih.gov/pubmed/3907859 . PubMed is a web-based index to biomedical journal literature. Not all, but most publications will have a PubMed record. To find the PubMed ID URL, go to http://www.pubmed.gov and search by title or author. The PMID ID number is noted in the upper left hand corner of the PubMed article citation display. If recording only the ID and not the full URL, do not include the "PMID ID" prefix.		
Website(s)	URL of any web pages that describe or link to the protocol document. If the full text of the document is not available through a free public archive, leave this field blank. It is not necessary to record the URL for the PubMed citation or other page that only provides a reference to the document.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Reagents Introduction and Workflow

A reagent is a substance that is used in a chemical reaction or other experimental process to detect, measure, examine or produce other substances. Sometimes people confuse reagents with other biological specimens or organisms. eagle-i collects information about antibodies, cell lines, chemicals, constructs, gene knockdown reagents, microarrays, nucleic acid reagents, proteins, and reagent libraries.

Creating Reagent Records

When entering resource information in the SWEET, the type of reagent selected in the Reagent Type field determines which fields display in the main body of the record. Therefore, it is necessary that this field be annotated correctly before entering or editing new records.

Special Issues and Workarounds

Greek characters are now fully supported and should be used where applicable. Super/subscripts may be represented using either brackets or HTML:

- Superscripts may be indicated using square brackets around the text. For example, for allele names: *agil*^{2J} would be entered as *agil*[2J].
- Both super- and subscripts can also be represented using the HTML tags <sup> and <sub>. In particular, these tags should be used for resources for which the addition of extra brackets might be misleading. For example: the chemical compound [¹¹C]CH₃I (methyl iodide) would be entered as [¹¹C]CH₃I. In these cases, in order to ensure the resource will still come up in search results, a version of the name without the HTML tags should also be entered in the Additional Name field.

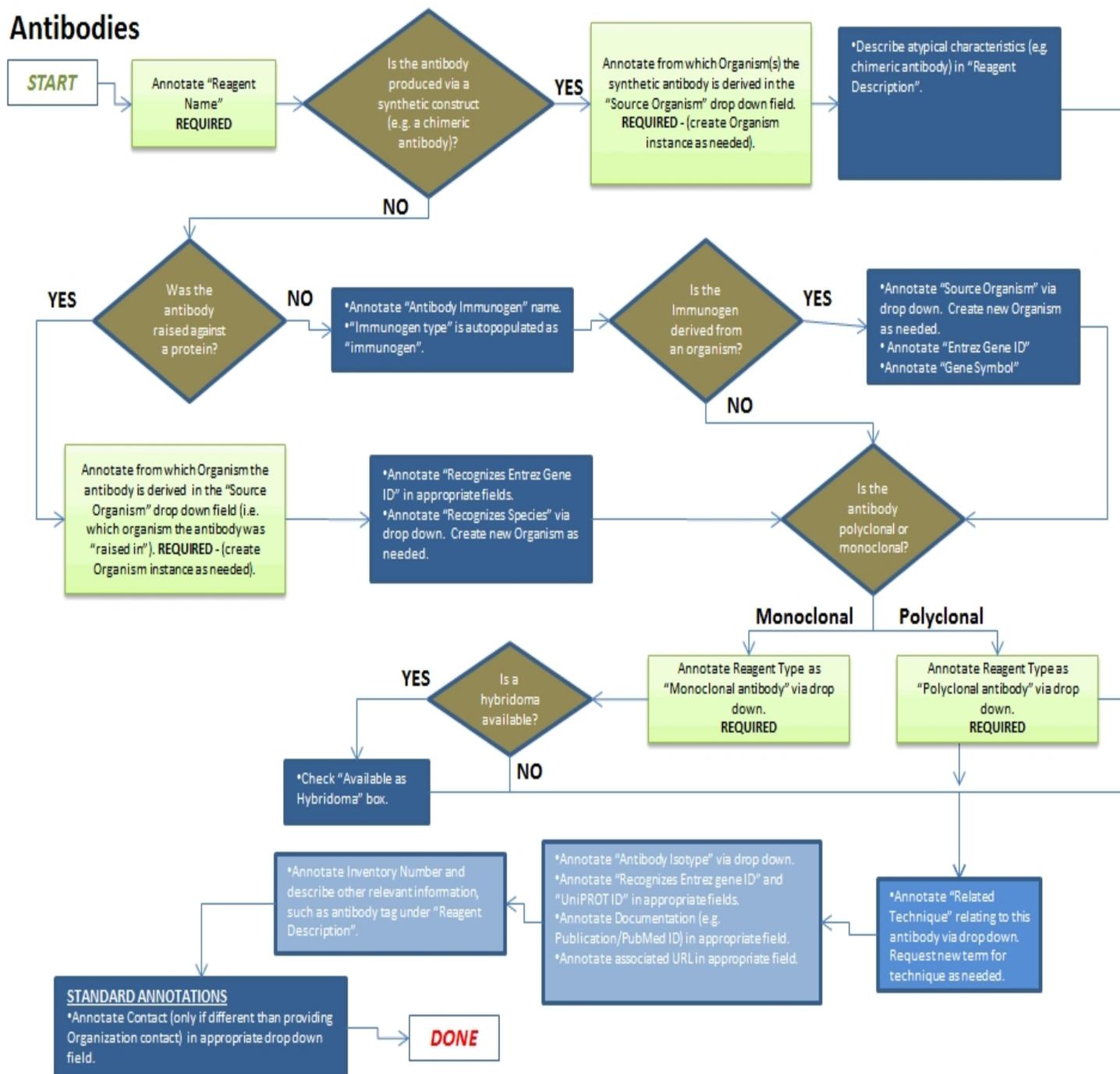
Available Guidelines for Reagent Records

- [Antibodies](#)
- [Cell Lines](#)
- [Chemical Reagents](#)
- [Constructs](#)
- [Gene Knockdown Reagents](#)
- [Microarrays](#)
- [Nucleic Acid Reagents](#)
- [Protein Reagents](#)
- [Reagent Libraries](#)

Antibodies Introduction and Workflow

Antibodies are reagents comprised of immunoglobulins produced by B cells in response to an antigen. Antibody reagents can be engineered to have specificity for specific antigens.

Antibodies



Antibodies Field Annotation

Note: NR indicates a non-repeatable field.

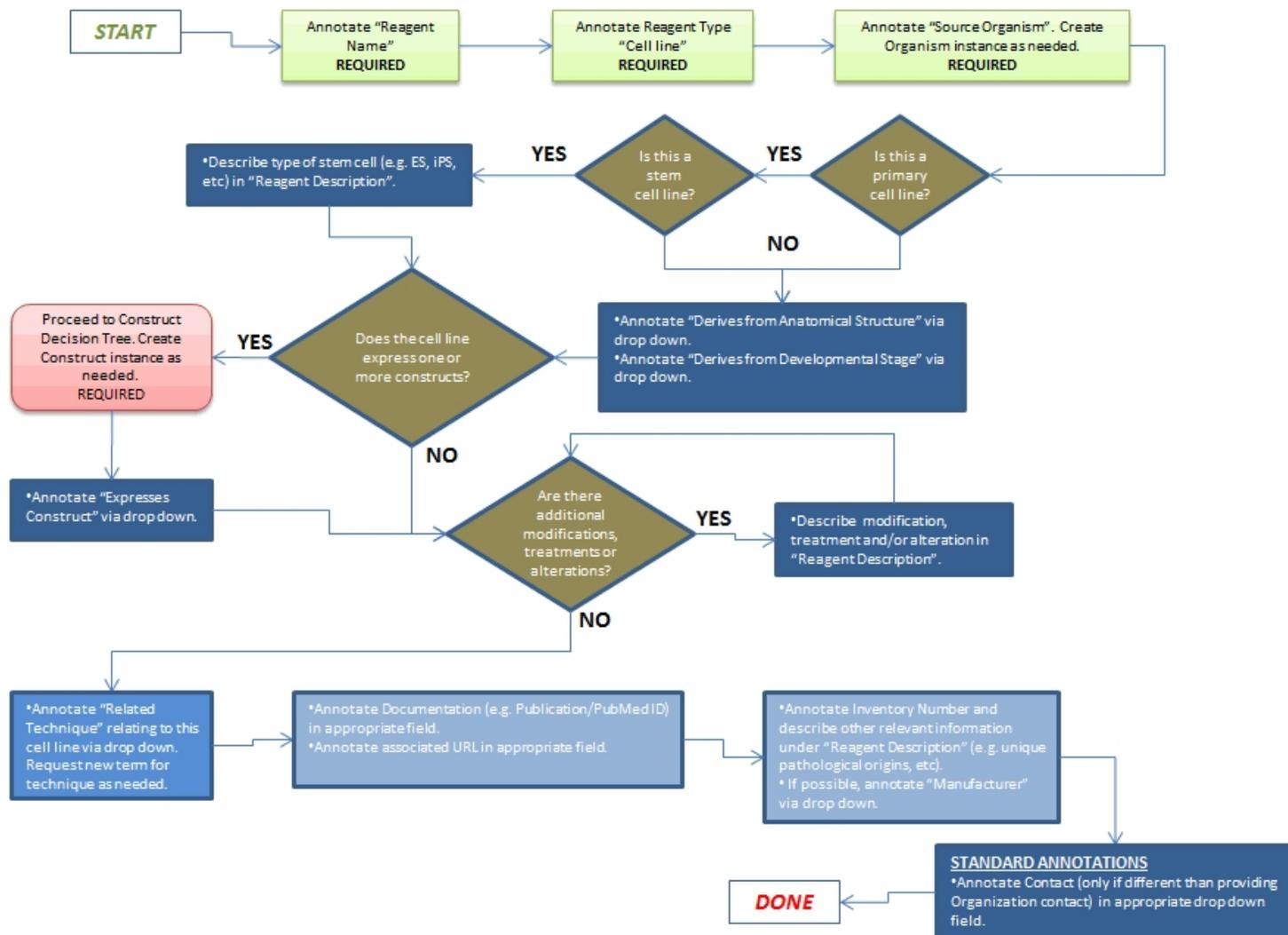
Field	Description	Req.	NR
Reagent Name	Write as "Organism anti-organism <i>Protein</i> ", for example, "Mouse anti-human Tubulin".	Yes	✓
Reagent Type	Should be polyclonal or monoclonal. In most cases, this should be known. If only the root type "antibody" is selected and the antibody is commercially available, check the manufacturer's online catalog to determine the appropriate sub-type. If the antibody is not commercially available or the manufacturer is unknown, the record should be sent back to the record creator to determine sub-type.	Yes	✓
Reagent Description	Should include any information that describes the antibody but is not captured in any of the other fields. High value data to be captured in Description field: describe atypical characteristics. For example, if the antibody is a synthetic construct, then it's important to describe it here.		
Reagent Additional Name	Alternate antibody name. Should include any abbreviations or alternate spellings or names for the resource.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the resource. Not needed if the same as the providing organization contact.		
Developed by	Name of any people who developed or helped develop the antibody. Use this field if the person was responsible for personally designing the antibody; the manufacturer field should be used only for mass production.		
Related Technique	Method related to or performed using the antibody (in other words, techniques for which you can use the antibody; how the antibody was used as a whole). Should not include any technique used to generate the antibody. May include a term request. Choose "Antibody related technique" from the drop-down to see a list common techniques related to antibodies. Choose "Technique" so see the full technique hierarchy instead.		
Source Organism	The organism from which the antibody is derived (use generic organism). In most cases, it will be only one organism, but it is possible to be more than one. See Organism and Viruses Introduction for more detail.	Yes	
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
<u>Antibody Target(s)</u>	A substance that is recognized by the antibody. Most often this is a protein but can also include chemicals, or biological materials such as cells or organisms.		
<u>Immunogenic Material</u>	A substance used to generate an immune response to produce an antibody. For example, a protein, a tissue, or a virus.		
Isotype	Chose from the drop-down menu. This information can often be found on a commercial antibody data sheet from the manufacturer.		
Antibody Registry ID	The unique ID number assigned to an antibody in the Neuroscience Information Framework (NIF) antibody registry. Should be entered in the format: AB_#####		

Conjugate	A molecule conjugated to the antibody, which can be used to detect the presence of the antibody.		
Manufacturer	Name of the organization that created the antibody. May also be a person, but only if the person mass produces the antibody. Use the Developed by field for antibodies designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Catalog Number	Commercial catalog number.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the antibody.		
Clone ID	Clone identification number assigned to a monoclonal antibody.		
Inventory Number	The laboratory inventory identifier for the antibody. Format should correspond to whatever is used by the lab. For commercial resources, use the Catalog Number field instead.		
Lot Number	The lot number assigned by the manufacturer for the antibody.		
Related grant number	Grant number for the funding that contributed to the development of the antibody. For example: 'U24 RR 029825'.		
Related Hybridoma Cell Line	Hybridoma cell line used to produce the antibody. Applies to Monoclonal antibodies only. Note: A separate record for the hybridoma cell line should only be created/linked to in this field if it is also available for sharing by the lab.		
Related Publication or Documentation	Refers to protocols, journal articles, or patents that contain information related to the antibody. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Website(s)	If applicable, can add link to manufacturer's web page for that antibody.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Cell Lines Introduction and Workflow

A cell line reagent is a population of cells cultured in vitro that are descended through one or more generations (and possible sub-cultures) from a single primary culture which was originally derived from part of an organism. The cells of such a population share common characteristics.

Cell Lines



Cell Lines Field Annotation

Note: NR indicates a non-repeatable field.

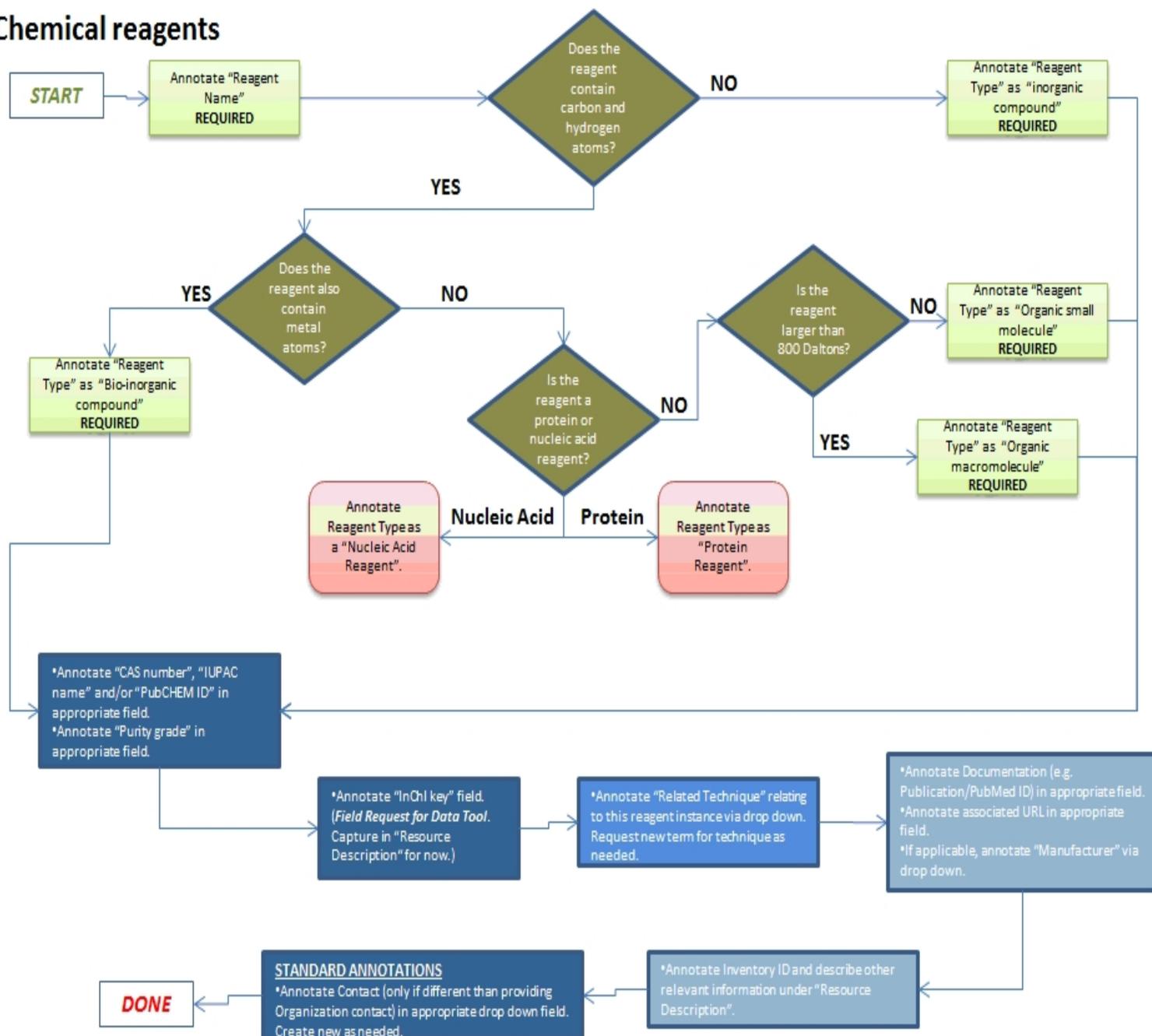
Field	Description	Re-q.	N-R
Reagent Name	Name cells as specifically as possible. Provide any additional names in the appropriate field below. For example: use "HEK 293" (instead of "293") in this field and "Human Embryonic Kidney 293" as an additional name.	Yes	✓
Reagent Type	Choose the appropriate sub-type.	Yes	✓
Reagent Description	Should include any information that describes the cell line but is not captured in any of the other fields. High value data: 1) Enter the selectable marker (marker name). Commonly used selectable markers: <ul style="list-style-type: none"> · Neomycin · Gentamycin · G418 · Hygromycin 2) Describe any modifications, treatments or alterations. Example: information about stable expression of genes, knock-downs, etc.		
Reagent Additional Name	Full name can be annotated here, for example, an additional name for CHO could be "Chinese hamster ovary cell line." If there is info about the stable expression of a gene, move that to Resource Description, for example: "EA.hy926 stably expressing THADA shRNA5" should be in Resource Description.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the cell line. Not needed if the same as the providing organization contact.		
Developed by	Name of any people who developed or helped develop the cell line. Use this field if the person was responsible for personally designing the cell line; the manufacturer field should be used only for mass production.		
Related Technique	Should be techniques for which you can use the cell line, techniques used to generate the cell line. For example, transfection or cell proliferation assay.		
Source Organism	Organism from which the cell line is derived. Should be a generic organism, unless the lab created the cell line from an organism in their lab. See Organisms guidelines for more detail.	Yes	
Access Restriction (s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Manufacturer	Name of the organization that created the cell line. May also be a person, but only if the person mass produces the cell line. Use the Developed by field for cell lines designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Catalog Number	Commercial catalog number. Should be formatted with the name of the company, followed by a colon, and then the number.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the cell line.		

Expresses Construct	High value field. Refers to the construct that has been introduced into the genome of a stable cell line. See guidelines for Constructs .		
Inventory Number	The laboratory inventory identifier for cell lines. Format should correspond to whatever is used by the lab. For commercial resources, use the Catalog Number field instead.		
Related Disease	Disease or condition for which the cell line presents some or all defining characteristics.		
Related grant number	Grant number for the funding that contributed to the development of the cell line. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain information about the cell line. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Source Anatomical Structure	Anatomical structure from which the cell line is derived.		
Source Organism Development Stage	Developmental stage from which the resource derives.		
Website(s)	The web address or addresses pertaining to the cell lines, if applicable. If applicable, you can add a link to the manufacturer's web page for that cell line.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Chemical Reagents Introduction and Workflow

Chemical reagents are a material of pure chemical composition, either an element or a compound.

Chemical reagents



Chemical Reagents Field Annotation

Note: NR indicates a non-repeatable field.

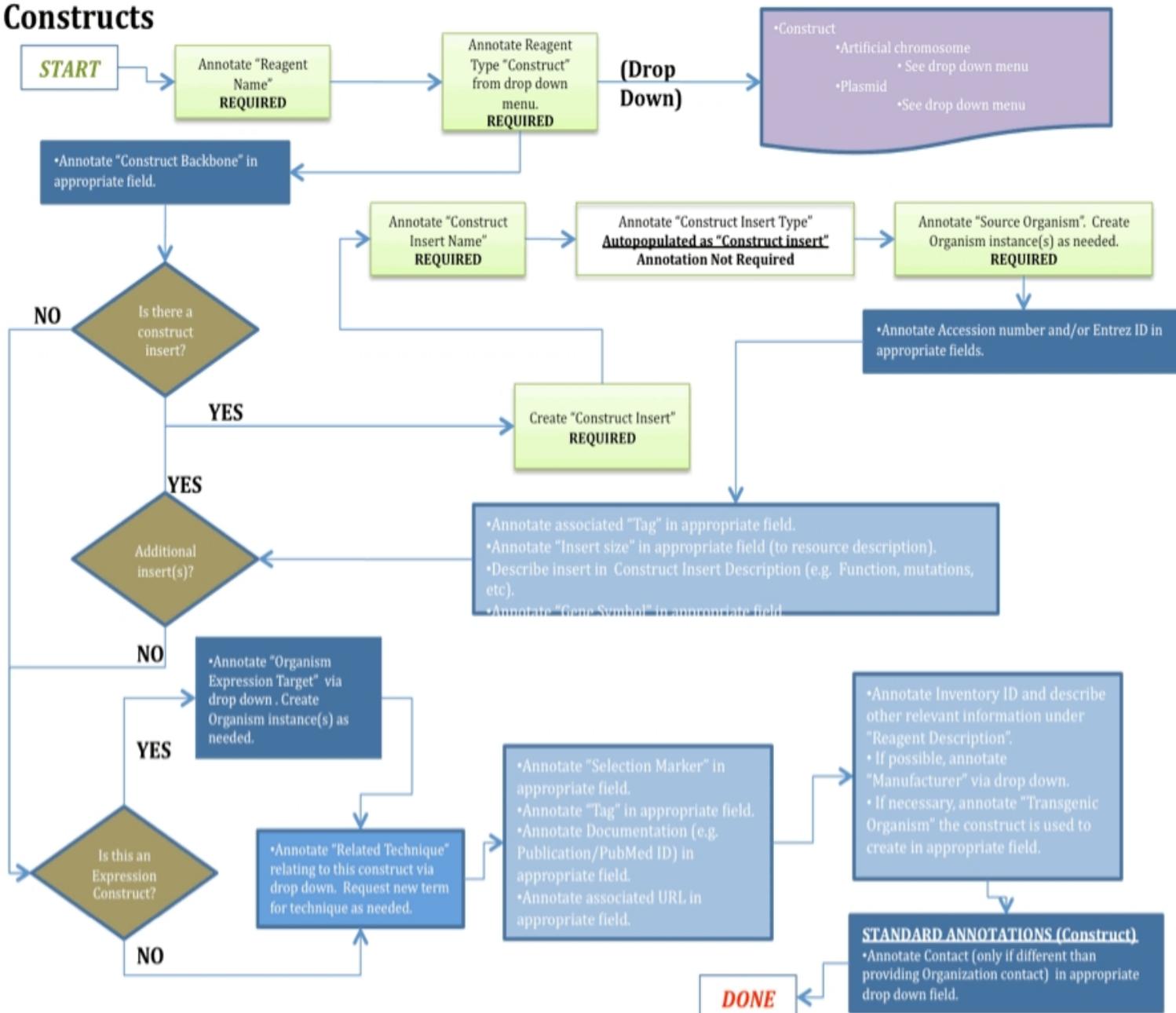
Field	Description	Req.	NR
Reagent Name	The name of chemical reagent. The full name is preferred (for example: "Sodium hydroxide") but molecular formula may also be used if more common. See the guidelines for superscripts for more details on how to enter molecular formulas.	Yes	✓
Reagent Type	If subtype is not annotated, you may be able to determine its type based on the chemical structure or CAS number, if it is provided. If it cannot be looked up, then it should be sent back to the record creator.	Yes	✓
Reagent Description	Should include any information that describes the chemical but is not captured in any of the other fields.		
Reagent Additional Name	Alternate chemical name. Should include any abbreviations or alternate spellings or names for the resource, for example: NaOH. If the full name was not used in the label, it should be entered here.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the chemical. Not needed if the same as the providing organization contact.		
Developed by	Name of any people who developed or helped develop the chemical. Use this field if the person was responsible for personally designing the chemical; the manufacturer field should be used only for mass production.		
Related Technique	Method related to or performed using the chemical. Should not include any technique used to generate the chemical.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Manufacturer	Name of the organization that created the chemical. May also be a person, but only if the person mass produces the chemical. Use the Developed by field for chemicals designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
CAS Number	High Value Field. A numeric identifier that can contain up to 10 digits, divided by hyphens into three parts. http://chem2.sis.nlm.nih.gov/chemidplus/chemidlite.jsp Example: Caffeine: 58-08-2.		
Catalog Number	Commercial catalog number. Should be formatted with the name of the company, followed by a colon, and then the number.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the chemical.		
InChi Key	High Value Field. A unique identifier assigned to each record in the InChi Key database: http://cactus.nci.nih.gov/chemical/structure . (InChI keys require special software but the above link may find them) Example: Ethanol: 1/C2H6O/c1-2-3/h3H,2H2,1H3		
Inventory	The laboratory inventory identifier for the chemical reagent. Format should correspond to what-		

Number	ever is used by the lab. For commercial resources, use the Catalog Number field instead.		
IUPAC Name	International Union of Pure and Applied Chemistry (IUPAC) nomenclature is another system of naming chemicals. Caution is necessary when names are long. IUPAC names can be found on MSDS, SciFinder, Merck Index, and IUPAC database (http://www.chem.qmul.ac.uk/iupac/), etc., for example, "1,3,7-trimethyl- 1H-purine- 2,6(3H,7H)-dione"		
PubChem ID	High Value Field. Identifier from the PubChem database of chemical molecules: http://pubchem.ncbi.nlm.nih.gov/ Example: Ethanol: CID: 702		
Purity Grade	Purity grade of chemical, often expressed in the product name by means of a quality denomination that follows to the product nomenclature, such as Guaranteed Rights. This website has an example of purity grades: http://www.advtechind.com/grade.htm		
Related grant number	Grant number for the funding that contributed to the development of the chemical. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain information about the chemical. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Website(s)	The web address or addresses pertaining to the chemical, if applicable.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Constructs Introduction and Workflow

A construct is a reagent that is a virus or DNA molecule capable of autonomous replication, used as a vehicle to transfer foreign genetic material into a host cell. A construct may contain an insert of DNA from an external source, and may be used for cloning or for expression purposes.

Constructs



Constructs Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Reagent Name	Ideally this should describe the backbone and insert or whatever the lab has named it. For example: pBSK-SHH.	Yes	✓
Reagent Type	Acceptable to type as root: "construct." Expression construct is an inferred type and should not be selectable. It is inferred when an expression host is chosen.	Yes	✓
Reagent Description	Should include any information that describes the construct reagent but is not captured in any of the other fields.		
Reagent Additional Name	Alternate chemical name. Should include any abbreviations or alternate spellings or names for the resource.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the construct reagent. Not needed if the same as the providing organization contact.		
Developed by	Name of any people who developed or helped develop the construct. Use this field if the person was responsible for personally designing the construct; the manufacturer field should be used only for mass production.		
Related Technique	Refers to the technique with which the construct is used, for example, transfection or transgenic animal model generation.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Sequence	The nucleic acid or protein sequence. For example, ATGCCG or MATLK.		
Manufacturer	Name of the organization that created the construct. May also be a person, but only if the person mass produces the construct. Use the Developed by field for constructs designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Accession Number	Unique identifier of a biological polymer sequence (DNA, RNA, protein) when it is submitted to a sequence database. Example: AC_123456. Note: First two letters can vary, for thorough formatting examples, see: http://www.ncbi.nlm.nih.gov/RefSeq/key.html#accession . Also: http://www.ncbi.nlm.nih.gov/nucore .		
Catalog Number	Commercial catalog number. Should be formatted with the name of the company, followed by a colon, and then the number.		
Construct Backbone	High Value Field. Name of the construct backbone. This label is often the first part of a construct name and refers to the part of the construct that is not the insert. Manufacturer would typically be associated with construct backbone.	Yes	
Construct Insert	High value field. Identifies the contents of the construct. Could be just the gene name or the gene name with the modification. Not required, because there is not always an insert necessarily, but should be sent to a domain expert for review if missing, for example, SHH or SHH[delta]S45A. Should be a separate insert for each construct.		

	Note on additional insert(s): If the construct has more than one gene inserted into it, for example, pRS424-ADH/B42-SRB2 contains both the ADH gene and the SRB2 gene, two construct inserts should be created, each with their own name, then the "source organism" the two Entrez Gene ID's. Fluorescent markers such as GFP, should be annotated in the Tag field.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the construct.		
Inventory Number	The laboratory inventory identifier for the construct. Format should correspond to whatever is used by the lab. For commercial resources, use the Catalog Number field instead.		
Organism Expression Target	For expression constructs only. Generic Organism should be annotated. If it is a prokaryote, change to prokaryotic expression construct. If prokaryotic: should only be prokaryote, can be verified in the glossary. See Organisms Guidelines for more detail.		
Related grant number	Grant number for the funding that contributed to the development of the construct. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain information about the construct. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Selectable Marker	High Value Field. Gene that confers antibiotic resistance. Bacterial selection markers and mammalian selection markers should all go in this field; there is no need to indicate which type of marker it is. For example: for bacterial selection marker, ampicillin- write Ampicillin. Or for mammalian selection marker, hygromycin- write Hygromycin. NOTE: If someone writes Amp or AmpR- this means Ampicillin. Also may commonly see Kan or KanR=Kanamycin.		
Transgenic Organism	High Value Field. Organism in which the construct is designed to be expressed. See Organisms Guidelines for more detail.		
Website(s)	The web address or addresses pertaining to the construct, if applicable. Web page URLs should be in the format http://<lab name> or https://<lab name>.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Gene Knockdown Reagents Introduction and Workflow

A Gene Knockdown reagent is a reagent that is capable of reducing the expression of a target gene in a biological system.

Gene Knockdown Reagent Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Reagent Name	Name of gene knockdown reagent, such as SHH siRNA oligo.	Yes	✓
Reagent Type	Should be one of the sub-types.	Yes	✓
Reagent Description	Should include any information that describes the gene knockdown reagent but is not captured in any of the other fields.		
Reagent Additional Name	Alternate resource name. Should include any abbreviations or alternate spellings or names for the resource.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the resource. Not needed if the same as the providing organization contact. Should be entered in the name format: Last name, First name.		
Developed by	Name of any people who developed or helped develop the gene knockdown reagent. Use this field if the person was responsible for personally designing the resource; the manufacturer field should be used only for mass production.		
Related Technique	Method related to or performed using the gene knockdown reagent, for example: transfection or electroporation. Should not include any technique used to generate the reagent.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Sequence	The nucleic acid or protein sequence. For example, ATGCCG or MATLK.		
Manufacturer	Name of the organization that created the gene knockdown reagent. May also be a person, but only if the person mass produces the resource. Use the Developed by field for gene knockdown reagents designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Catalog Number	Commercial catalog number.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the gene knockdown reagent.		
Inventory Number	The laboratory inventory identifier for the gene knockdown reagent. Format should correspond to whatever is used by the lab. For commercial resources, use the Catalog Number field instead.		
Related grant number	Grant number for the funding that contributed to the development of the gene knockdown reagent. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain information about the resource. For the purposes of annotation, websites are not considered documents and		

	should be entered into the Website(s) field instead.		
Website(s)	The web address or addresses pertaining to the gene knockdown reagent, if applicable. Web page URLs should be in the format http://<lab name> or https://<lab name>. If the http:// or https:// is not included, the link will not work.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Microarrays Introduction and Workflow

A microarray reagent is a processed material that is made to be used in an analyte assay. It consists of a physical immobilization matrix in which substances that bind the analyte are placed in regular spatial position.

Microarray Reagent Field Annotation Table

Note: NR indicates a non-repeatable field.

Field	Description	Req	NR
Reagent Name	Name of microarray reagent, such as Affymetrix mouse microarray.	Yes	✓
Reagent Type	Should be one of the sub-types. Can request a new term.	Yes	✓
Reagent Description	Should include any information that describes the microarray reagent but is not captured in any of the other fields.		
Reagent Additional Name	Alternate resource name. Should include any abbreviations or alternate spellings or names for the resource.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the resource. Not needed if the same as the providing organization contact. Should be entered in the name format: Last name, First name.		
Developed by	Name of any people who developed or helped develop the antibody. Use this field if the person was responsible for personally designing the antibody; the manufacturer field should be used only for mass production.		
Related Technique	Should refer to the technique with which the microarray reagent is used, for example, Affymetrix microarray.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Manufacturer	Name of the organization that created the microarray. May also be a person, but only if the person mass produces the microarray. Use the Developed by field for microarrays designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Catalog Number	Commercial catalog number.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the microarray.		
Inventory Number	The laboratory inventory identifier for the microarray reagent. Format should correspond to whatever is used by the lab. For commercial resources, use the Catalog Number field instead.		
Related grant number	Grant number for the funding that contributed to the development of the microarray. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain information about the microarray. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		

Website(s)	The web address or addresses pertaining to the microarray reagent, if applicable.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Nucleic Acid Reagents Introduction and Workflow

A Nucleic Acid reagent is a polymer comprised of nucleotides, each of which consists of three components: a nitrogenous heterocyclic base, which is either a purine or a pyrimidine; a pentose sugar; and a phosphate group.

Nucleic Acid Reagents Field Annotation

Note: NR indicates a non-repeatable field.

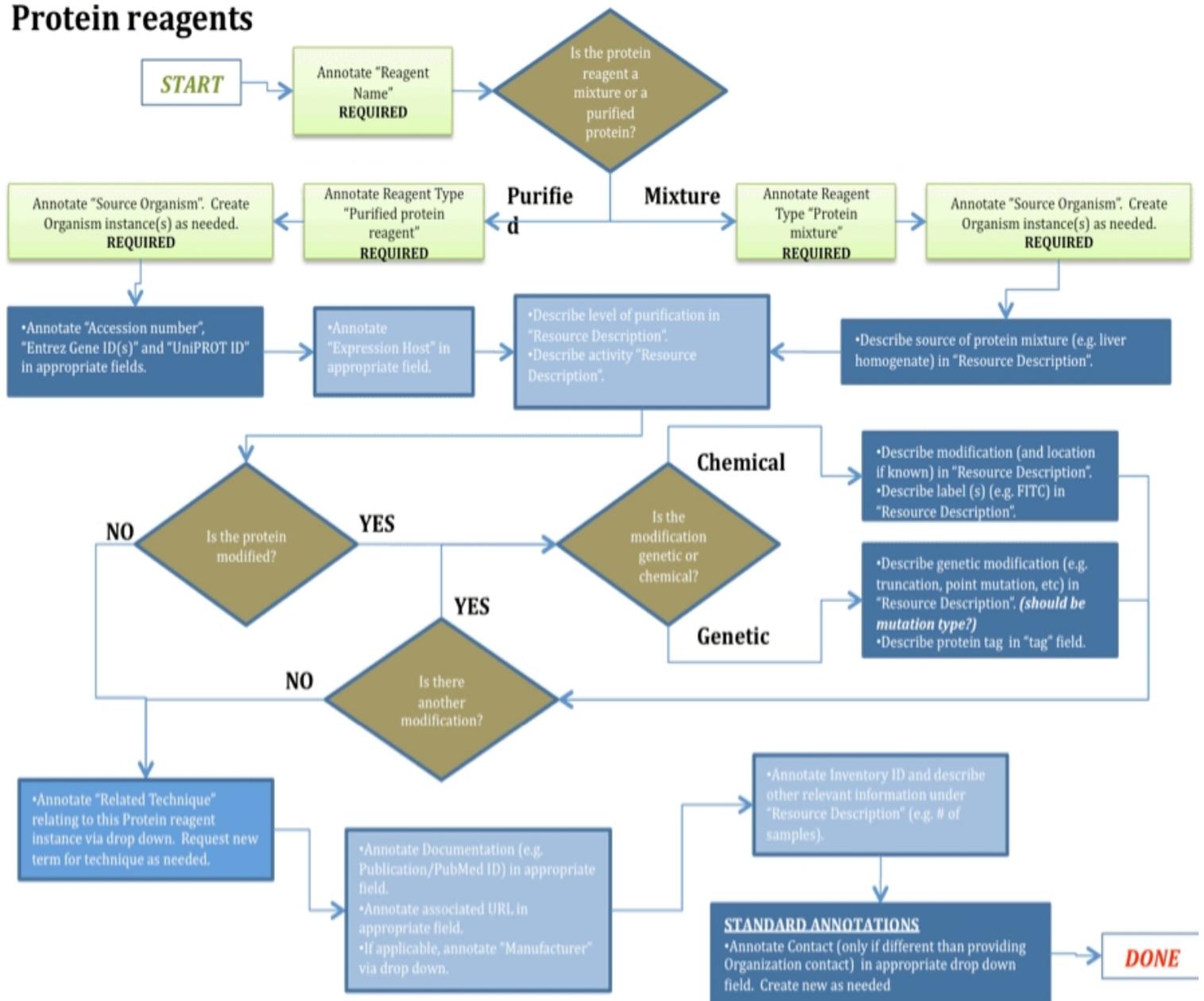
Field	Description	Req.	NR
Reagent Name	Name of nucleic acid reagent.	Yes	✓
Reagent Type	Should be nucleic acid reagent or a sub-type.	Yes	✓
Reagent Description	Should include any information that describes the nucleic acid reagent but is not captured in any of the other fields. Note: Either Entrez gene ID OR both the organism and the gene name is required. If missing organism or entrez gene, then there should be an explanation why in resource description.		
Reagent Additional Name	Spell out abbreviations such as SHH siRNA= Sonic Hedgehog small interfering RNA.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the nucleic acid reagent. Not needed if the same as the providing organization contact.		
Developed by	Name of any people who developed or helped develop the nucleic acid reagent. Use this field if the person was responsible for personally designing the resource; the manufacturer field should be used only for mass production.		
Entrez Gene ID	High Value Field. Refers to the unique identifier assigned to each record in the Entrez Gene database (http://www.ncbi.nih.gov/gene?term=entrez%20gene%20ID). Should be annotated with the full URL, which will include the ID. For example: http://www.ncbi.nlm.nih.gov/gene/27185		
Entrez Gene Symbol	Symbol for gene. Examples: SHH for sonic hedge hog. Can be verified at: http://ncbi.nlm.nih.gov/nuccore		
Genetic Alteration	High Value Field. Select an existing Genetic Alteration or create a new record.		
Related Technique	Method related to or performed using the nucleic acid reagent. Should not include any technique used to generate the reagent.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Sequence	The nucleic acid or protein sequence of the construct. For example, ATGCCG or MATLK.		
Manufacturer	Name of the organization that created the nucleic acid reagent. May also be a person, but only if the person mass produces the resource. Use the Developed by field for nucleic acid reagents designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		

Catalog Number	Commercial catalog number.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the nucleic acid reagent.		
Inventory Number	The laboratory inventory identifier for nucleic acid reagent. Format should correspond to whatever is used by the lab. For commercial resources, use the Catalog Number field instead.		
Related grant number	Grant number for the funding that contributed to the development of the nucleic acid reagent. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain information about the nucleic acid reagent. For the purposes of an annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Source Organism or Virus	The organism from which the nucleic acid reagent is derived.		
Website(s)	The web address or addresses pertaining to the nucleic acid reagent, if applicable. Web page URLs should be in the format http://<lab name> or https://<lab name>. If the http:// or https:// is not included, the link will not work.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Protein Reagents Introduction and Workflow

A protein reagent is a sequence of amino acids.

Protein reagents



Protein Reagents Field Annotation

For purified proteins: A minimum of either "Accession number", "Entrez Gene ID(s)" and "UniPROT ID" is required. If all are absent, look up at least one or send back to the record creator. Note: Need to know "Derives from Organism" in order to determine ID#.

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Reagent Name	Protein name. Describe any modifications, such as tags, etc. For example: SHH-GST.	Yes	✓
Reagent Type	Should be protein reagent or subtype: protein mixture or purified protein reagent. If this is annotated as protein reagent, you may use the name, Entrez Gene ID or Accession Number to determine a more specific sub-type. If the resource has a specific protein name, it will be a purified protein reagent in most cases.	Yes	✓
Reagent Description	Should include any information that describes the protein but is not captured in any of the other fields. For protein mixtures, there should usually be a description. Send for review with a domain expert if there isn't any. Protein modifications should be described in this field, for example, truncations, domain mutations, point mutations, fusions, etc. If describing activity, should be formatted as "Activity: Free text." Use Gene Ontology for guidance when applicable. High value data: 1) Description of source of protein mixture (e.g. liver homogenate) 2) Description of chemical modification (and location, if known) 3) Describe label (s) (e.g. FITC) 4) Description of genetic modification (e.g. truncation, point mutation, etc)		
Reagent Additional Name	Alternate resource name. Should include any abbreviations or alternate spellings or names for the protein.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the protein. Not needed if the same as the providing organization contact. Should be entered in the name format: Last name, First name.		
Developed by	Name of any people who developed or helped develop the protein. Use this field if the person was responsible for personally designing the protein; the manufacturer field should be used only for mass production.		
Entrez Gene ID	High value field. Only applies to purified proteins. A unique identifier assigned to each record in the Entrez Gene database: http://www.ncbi.nlm.nih.gov/gene?term=entrez%20gene%20ID		
Entrez Gene symbol	High value field. Symbol for gene. Examples: SHH for sonic hedge hog . Can be verified at: http://www.ncbi.nlm.nih.gov/nuccore		
Genetic Alteration	High value field. Any alteration in gene; may be disease causing or a benign, normal variant. Select an existing Genetic Alteration or create a new record.		
Related Technique	Method related to or performed using the protein. Should not include any technique used to generate the protein.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional		

	(such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Sequence	The nucleic acid or protein sequence. For example, ATGCCG or MATLK.		
Manufacturer	Name of the organization that created the protein. May also be a person, but only if the person mass produces the resource. Use the Developed by field for proteins designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Accession Number	High value field. Only applies to purified proteins. The accession number is a unique identifier of a biological polymer sequence (DNA, RNA, protein) when it is submitted to a sequence database. Example: AC_123456. Note: First two letters can vary, for thorough formatting examples, see: http://www.ncbi.nlm.nih.gov/RefSeq/key.html#accession . http://www.ncbi.nlm.nih.gov/nucore		
Catalog Number	Commercial catalog number.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the protein.		
Expression Host	High value field. Host in which the protein is generated. Free text but should likely be mammalian cells, insect cells, bacterial cells. If there is something unusual in there, double check with a domain expert.		
Inventory Number	The laboratory inventory identifier for protein reagent. Format should correspond to whatever is used by the lab. For commercial resources, use the Catalog Number field instead.		
Related grant number	Grant number for the funding that contributed to the development of the protein. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain information about the protein. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Tag	High value field. Expression tag that allows tracking of the RNA or protein. Common examples: GFP, FLAG, HA, HIS, Myc.		
UniPROT ID	High value field. Only applies to purified proteins. Unique identifier of a protein when it is submitted to the UniPROT database: http://www.uniprot.org/ . Whenever possible, annotate the full URL of the ID, rather than just the ID itself. For example: http://www.uniprot.org/uniprot/A6NMY6 .		
Website(s)	The web address or addresses pertaining to the protein reagent, if applicable. Web page URLs should be in the format <a href="http://<lab name>">http://<lab name> or <a href="https://<lab name>">https://<lab name> . If the http:// or https:// is not included, the link will not work. The simplest form of the address should always be used.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Reagent Libraries Introduction and Workflow

A Reagent Library consists of a collection of individual reagents of a given type. eagle-i collects information about: Chemical libraries, Nucleic acid libraries, Organism libraries, Peptide libraries.

Available Guidelines for Reagent Library Records

- [Annotation Guidelines for Chemical libraries records](#)
- [Annotation Guidelines for Nucleic acid libraries records](#)
- [Annotation Guidelines for Organism libraries records](#)
- [Annotation Guidelines for Peptide libraries records](#)

Chemical Library Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Reagent Name	Name of chemical library.	Yes	✓
Reagent Type	Should be one of the sub-types.	Yes	✓
Reagent Description	Should include any information that describes the chemical library but is not captured in any of the other fields.		
Reagent Additional Name	Alternate resource name. Should include any abbreviations or alternate spellings or names for the chemical library.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the chemical library. Not needed if the same as the providing organization contact.		
Developed by	Name of any people who developed or helped develop the chemical library. Use this field if the person was responsible for personally designing the chemical library; the manufacturer field should be used only for mass production.		
Related Technique	Method related to or performed using the chemical library. Should not include any technique used to generate the reagent.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Manufacturer	Name of the organization that created the chemical library. May also be a person, but only if the person mass produces the library. Use the Developed by field for chemical libraries designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Catalog Number	Commercial catalog number.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the chemical library resource.		
Inventory Number	The laboratory inventory identifier for the chemical library. Format should correspond to whatever is used by the lab. For commercial resources, use the Catalog Number field instead.		
Library Count	Number of elements in the library. Format as number only.		
Library Source	High value field. Organization that is the original provider of the library.		
Related grant number	Grant number for the funding that contributed to the development of the chemical library. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain information about the chemical library. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Website(s)	The web address or addresses pertaining to the chemical library, if applicable. Web page		

	URLs should be in the format <a href="http://<lab name>">http://<lab name> or <a href="https://<lab name>">https://<lab name> . If the http:// or https:// is not included, the link will not work. The simplest form of the address should always be used.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		
Curator Notes	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		

Nucleic Acid Library Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Reagent Name	Name of nucleic acid library.	Yes	✓
Reagent Type	Should be one of the sub-types.	Yes	✓
Reagent Description	Should include any information that describes the nucleic acid library but is not captured in any of the other fields.		
Reagent Additional Name	Alternate resource name. Should include any abbreviations or alternate spellings or names for the nucleic acid library.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the nucleic acid library. Not needed if the same as the providing organization contact.		
Developed by	Name of any people who developed or helped develop the nucleic acid library. Use this field if the person was responsible for personally designing the nucleic acid library; the manufacturer field should be used only for mass production.		
Related Technique	Method related to or performed using the nucleic acid library. Should not include any technique used to generate the nucleic acid library.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Manufacturer	Name of the organization that created the nucleic acid library. May also be a person, but only if the person mass produces the nucleic acid library. Use the Developed by field for libraries designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Bacterial Host Strain	Bacterial strain in which the library is hosted.		
Catalog Number	Commercial catalog number.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the nucleic acid library.		
Inventory Number	The laboratory inventory identifier for the nucleic acid library. Format should correspond to whatever is used by the lab. For commercial resources, use the Catalog Number field instead.		
Library Count	Number of elements in the library. Format as number only.		
Library Source	High value field. Organization that is the original provider of the library.		
Producer Strain	Bacterial strain used to produce the nucleic acid library.		
Related grant number	Grant number for the funding that contributed to the development of the nucleic acid library. For example: 'U24 RR 029825'.		
Related Pub-	Refers to any protocols, journal articles, or patents that contain information about the nucleic acid		

lication or Documentation	library. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Source Organism or Virus	Organism from which the library is derived.		
Website(s)	The web address or addresses pertaining to the nucleic acid, if applicable. Web page URLs should be in the format http://<lab name> or https://<lab name>. If the http:// or https:// is not included, the link will not work. The simplest form of the address should always be used.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Peptide Library Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Reagent Name	Name of peptide library.	Yes	✓
Reagent Type	Could be peptide library or sub-type.	Yes	✓
Resource Description	Should include any information that describes the peptide library but is not captured in any of the other fields. Note: ALL Peptide library records should contain a description (information about what the library contains, applications, etc.). Send for review with a domain expert if there isn't any.		
Reagent Additional Reagent	Alternate resource name. Should include any abbreviations or alternate spellings or names for the protein.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the peptide library. Not needed if the same as the providing organization contact.		
Developed by	Name of any people who developed or helped develop the peptide library. Use this field if the person was responsible for personally designing the peptide library; the manufacturer field should be used only for mass production.		
Related Technique	Method related to or performed using the peptide library. Should not include any technique used to generate the library.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Manufacturer	Name of the organization that created the peptide library. May also be a person, but only if the person mass produces the library. Use the Developed by field for peptide libraries designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Catalog Number	Commercial catalog number.		
Derives from Organism	Organism from which the peptide was derived. If missing organism, there should be an explanation why in resource description (i.e. could be synthetic).		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the peptide library.		
Inventory Number	The inventory identifier for the peptide library. For commercial resources, use the Catalog Number field instead.		
Library Count	Number of elements in the library. Format as number only.		
Library Source	High value field. Organization that is the original provider of the library.		
Related grant number	Grant number for the funding that contributed to the development of the peptide library. For example: 'U24 RR 029825'.		
Related Pub-	Refers to any protocols, journal articles, or patents that contain information about the peptide		

lication or Documentation	library. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Website(s)	The web address or addresses pertaining to the peptide library, if applicable. Web page URLs should be in the format http://<lab name> or https://<lab name>. If the http:// or https:// is not included, the link will not work. The simplest form of the address should always be used.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Organism Library Field Annotation

Note: NR indicates a non-repeatable field.

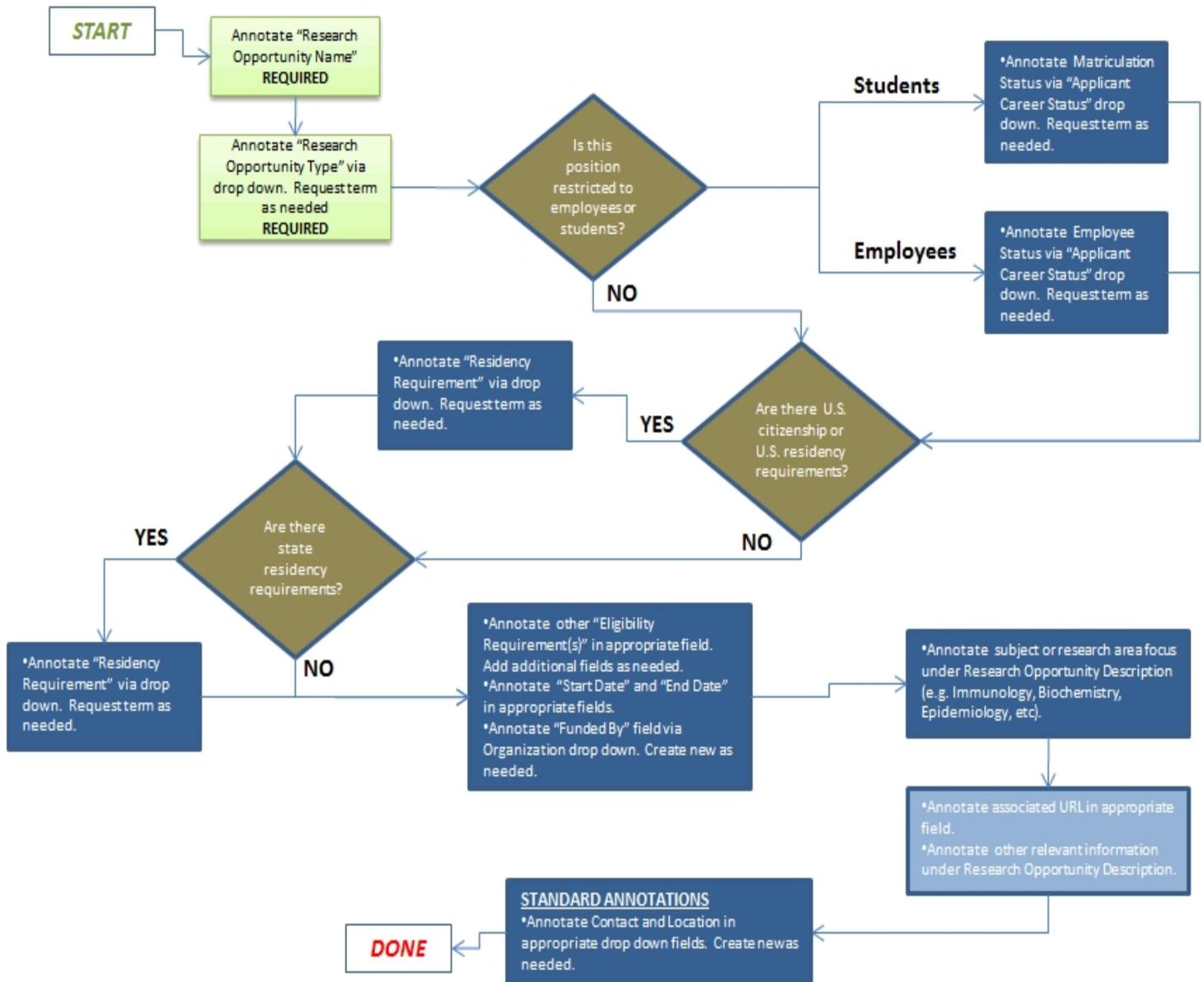
Field	Description	Req.	NR
Reagent Name	Name of organism library.	Yes	✓
Reagent Type	Should be one of the sub-types.	Yes	✓
Reagent Description	Should include any information that describes the organism library but is not captured in any of the other fields.		
Reagent Additional Name	Alternate resource name. Should include any abbreviations or alternate spellings or names for the organism library.		
Location	Link to the record of the owning organization. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the organism library. Not needed if the same as the providing organization contact.		
Developed by	Name of any people who developed or helped develop the organism library. Use this field if the person was responsible for personally designing the organism library; the manufacturer field should be used only for mass production.		
Related Technique	Method related to or performed using the organism library. Should not include any technique used to generate the library.		
Access Restriction(s)	Should contain any restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Manufacturer	Name of the organization that created the organism library. May also be a person, but only if the person mass produces the library. Use the Developed by field for organism libraries designed by a person but not mass produced. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Catalog Number	Commercial catalog number.		
Exchange facili-	Enter the URL for any third-party service that facil-		

iator	itates payment for or access to the organism library.		
Expression vector	Expression vector into which the library is cloned. Lambda phage libraries only.		
Inventory Number	The laboratory inventory identifier for the organism library. Format should correspond to whatever is used by the lab. For commercial resources, use the Catalog Number field instead.		
Related grant number	Grant number for the funding that contributed to the development of the organism library. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain information about the organism library. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Website(s)	The web address or addresses pertaining to the organism, if applicable. Web page URLs should be in the format http://<lab name> or https://<lab name>. If the http:// or https:// is not included, the link will not work. The simplest form of the address should always be used.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		
Curator Notes	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		

Research Opportunities Introduction and Workflow

Research Opportunities are opportunities to participate in research training. Research opportunities may be available to people at any stage of their career.

Research Opportunity



Research Opportunity Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Research Opportunity Name	Name of the research opportunity. Example: <i>Postdoctoral Research Fellowships in Biology</i> .	Yes	✓
Research Opportunity Type	Research Opportunity is currently the only choice. Submit term request for other terms.	Yes	✓
Research Opportunity Description	Should include any information that describes the opportunity but is not captured in any of the other fields.		
Research Opportunity Additional Name	Any additional names for the Research opportunity. Should include any abbreviations or alternate spellings.		
Provided By	This field will automatically populate with the providing Organization.		✓
Contact	Use this field if the contact person for the Research Opportunity is different than the contact person for the Organization as a whole.		
Start Date	Earliest date at which the opportunity is available. Format as: MM/DD/YYYY. Example: 07/13/2010.		
End Date	Date at which the opportunity is no longer available. Format as: MM/DD/YYYY. Example: 07/13/2010.		
Access Restriction(s)	Should contain any additional restrictions on resource availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Additional Topic(s)	Should contain the subject area for the opportunity, for example, Bioinformatics. Level of detail may vary.		
Applicant Career Status	This should contain the employee status and/or matriculation status of applicants that may apply for the research opportunity and should be filled with as many as are applicable. Select the status from the drop-down menu. Click + add different entries.		
Eligibility Requirement	Possible training opportunity eligibility requirements include coursework, minimum GPA, state residency, under-represented group status, field of study, or matriculation status. Fill in as many as are applicable. Click + to add separate entries.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the research opportunity.		
Funded By	Name of the funding organization providing financial support for the Research Opportunity. In most cases, this will be a government organization, parent organization, or affiliate of the lab rather than the lab itself. Funding Organization records must be sent to curation and published separately. See: Adding a New Funding Organization Record for more information.		
Related grant number	Grant number for the funding that contributed to the development of the Research Opportunity. For example: 'U24 RR 029825'.		
Residency	This should contain the US residency status of applicants who may apply for the research oppor-		

Requirement	tunity, if applicable. Select from the drop-down menu.		
Website(s)	The web address or addresses pertaining to the Research Opportunity, if applicable.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓

Services Introduction and Workflow

A *service* is a planned process carried out by an organization with the objective of performing a technique, providing training, providing storage of data or physical resources, or providing access to instruments for another person or organization.

Service records often reference other types of records, particularly instruments, protocols, software, techniques, and people. Before publishing service record, it is important to open each referenced record to ensure that the correct connections have been made. See [Deleting Records](#) for more details on how to deal with incorrect connections.

Core Facilities and Tech Transfer Offices

Although research laboratories, centers and other organizations may sometimes provide services, they are most often associated with core laboratories; by definition, every published core laboratory must have provide at least one published service, even if that service is merely access to equipment or facilities.

If the service is provided by a [Technology Transfer Office](#), see the section Technology Transfer Office for special considerations.

Creating Service Records

Watch [this video tutorial](#) for a demonstration of how to create service records in the SWEET.

It is especially important for service records to be well described. Although some service names alone may provide enough of a description, many require more information to make what the service includes clear to users. You should ensure that a concise but complete description is available, either by questioning the record creator or pulling information off of the organization's website.

Consolidating Service Records

In some cases, a record creator may have created multiple individual records that are variations upon a theme and contain very little distinct information other than a service name. You should use your best judgment to determine whether consolidating these records would make more sense from a search user perspective, both aesthetically and content-wise: for example, if a particular core offers a large number of similar tests, but provides no information about each one other than a name, it may be preferable to create one record with a more generic name and include the list of individual tests in the resource description. In this way, the information is still searchable, but avoids having a large number of mostly empty records. If there is detailed information available about each test, however, it may make more sense to leave them as individual records.

To consolidate service records, you must manually copy and paste all relevant information into whatever records are being kept and make sure to re-link any associated records before deleting any of the records not being kept. See guidelines for [Merging Records](#).

Services Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Service Name	Name of the service, for example, <i>Analyte detection</i> . Service names should be as clear as possible. Example: <i>HPV testing</i> is a sufficiently clear service name; <i>HPV</i> alone is ambiguous. If necessary, the word "service" may also be appended to the end of the label to aid in clarity; you should use best judgment to decide whether or not this is needed. First letter of the name should be capitalized, subsequent letters should be all be lowercase in the text string.	Yes	✓
Service Type	If annotated to "Service," you may choose the sub-type if it is obvious from title or description. If more than one could conceivably apply, choose the one most applicable. If no sub-types are obvious, it is acceptable to leave the root type, but choose a sub-type wherever possible.	Yes	✓
Service Description	Should include any information that describes the service but is not captured in any of the other fields.		
Service Additional Name	Alternate service name; should include any abbreviations or alternate spellings for the resource.		
Service Provided By	Name of the organization that provides the service. Pre-populated, read-only field.		✓
Contact	Use this field if the contact person for the service is different than the contact person for the organization as a whole.		
Related Technique	Any techniques or methods related to or performed <i>using</i> the service.		
Access Restriction(s)	Should contain any restrictions on service availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Topic	This field links the service to biological, processes, diseases, or organisms/viruses.		
Fee for Service	Check the box if the organization charges a fee for the service.		✓
Service fee URL	If there is a web page that details the fees charged for the service, add its URL here. Note: in general, specific fee amounts are considered too ephemeral to collect and should not be noted in the record itself.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the service.		
Related grant number	Grant number for the funding that contributed to the development of the service. For example: 'U24 RR 029825'.		
Related Protocol(s)	This field is for the protocol used to perform the service.		
Related Publication or Documentation	Refers to journal articles or patents related to the service. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Related Resource	These fields are for the databases, instruments, organisms or viruses, reagents, or software to which the service provides access.		
Website(s)	The web address or addresses pertaining to the service, if applicable. All services should have at		

	<p>least one website, if one is at all available. If no specific page exists for the service, use the main URL for the providing organization website, if one exists. If the providing organization has a specific page(s) devoted to services, that URL should go here, unless the page deals with fee information, in which case the URL should go in the "Service fee URL" field above.</p> <p>NOTE: If the only applicable URL contains fee information, it should only be filled in the record once; there is no need to put the same URL in both the website(s) and "Service fee URL" fields.</p>		
Comments	<p>Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.</p>		✓
Curator Note	<p>Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.</p>		✓

Software Introduction and Workflow

Software refers to digitally stored data, such as computer programs and other kinds of information read and written by computers.

Only a single record should be used to represent multiple copies of the same software in a single lab. Type in the number of copies available in the laboratory in the Resource Description, and include any separate version numbers on separate lines in the "Version" field. Multiple copies of the same software located in different laboratories should be represented by separate records.

Collecting Information About Algorithms

The past 10 years have seen an historic pace of technical advancement in DNA sequencing, DNA analysis, and the quantitative chemical analysis of complex mixtures. The resulting precipitous drop in the cost of endeavors like genome sequencing, transcription and protein profiling, and metabolic analyte analysis has produced an explosion of data quantity that has far outpaced the ability to efficiently analyze the results. This, in turn, has resulted in a great demand for better data analysis tools. In response, academic labs have made numerous local breakthroughs in mathematical analysis of complex data sets. These new data analysis methods are routinely incorporated into small, locally developed software programs designed to specifically meet the needs of a specific analytical problem.

Algorithm software produced in labs is generally shared freely with the community but scattered on individual laboratory websites and in open-source repositories. eagle-i collects information about these algorithms and allows organizations to represent software bundles (or tool kits), and to link individual pieces of algorithm software to demonstrate aggregated, multi-algorithm pipelines.

Software Field Annotation

Note: NR indicates a non-repeatable field.

Field	Description	Req.	NR
Software Name	Should contain the name of the software program, for example, <i>RNABuilder</i> .	Yes	✓
Software Type	Enter the type of software, if applicable. Sub-types are either <i>Algorithmic software component</i> or <i>Algorithmic software suite</i> . For other types of software, simply leave as the root type: <i>Software</i> .	Yes	✓
Software Description	The description should include any information that describes the software but is not captured in any of the other fields. A brief description of the software's function should be included here.		
Software Additional Name	Alternate software name. Should include any abbreviations or alternate spellings for the software.		
Used by	Link to the record of the owning organization that uses the software. Pre-populated, read-only field.		✓
Contact	Name of the primary person responsible for the software. Not needed if the same as the providing organization contact.		
Related Technique	Technique related to the software: For example, if it is software to analyze flow cytometry data, add technique: flow cytometry assay.		
Software purpose	Describes the purpose of the software. If the software's purpose isn't accurately captured by any of the terms available in the existing list, you may request a new term be added to the ontology.		

Access Restriction(s)	Should contain any restrictions on software availability. This may include both institutional (such as the providing laboratory, associated hospital, department, or university) and geographically-defined restrictions (such as metro areas, counties, states, or regions, university or consortium affiliation, professional certification). If more than one restriction applies, they should be entered on separate lines.		
Algorithm used	Algorithm that the software uses to complete its objective.		
Data Input	Describes the data that is put into the software at the start of its process.		
Data Output	Describes the data that is after the software process has been run. If the data output is the same as the data input, it is not necessary to fill this field out.		
Manufacturer	Name of the organization that created the software. May also be a person, but only if the person mass produces the software. Use the Developed by field for software not designed for mass production. In cases where people have been mistakenly entered as Organization records, or vice versa, they must be deleted and recreated.		
Coded in	Select the programming language in which the software is coded.		
Developed by	Name of any people or organizations who designed or helped develop the software for limited or internal use only. If the software was developed for commercial mass production, the manufacturer field should be used instead.		
Exchange facilitator	Enter the URL for any third-party service that facilitates payment for or access to the software.		
Operating System	The operating system(s) with which the software is compatible. Group multiple versions of the same operating system on the same line, for example, "Microsoft Windows XP, Vista, and 7" but use the + function to create a separate line for each operating system if multiple ones apply to the same piece of software: <ul style="list-style-type: none"> ■ Microsoft Windows XP, Vista, and 7 ■ Mac OS ■ Linux ■ Unix The names of common operating systems should be consistently formatted. Use "Microsoft Windows" for all Microsoft operating systems, never just Microsoft or Windows. Use "Mac OS" or "Mac OS X" for Apple operating systems; assume Mac OS as the default if OS X isn't specified.		
Related data collection method	For biostatistical analysis software, record if there is a particular data collection structure used to generate input data.		
Related grant number	Grant number for the funding that contributed to the development of the software. For example: 'U24 RR 029825'.		
Related Publication or Documentation	Refers to any protocols, journal articles, or patents that contain software information. For the purposes of annotation, websites are not considered documents and should be entered into the Website(s) field instead.		
Related study design	For biostatistical analysis software, record whether a particular study design is used to generate input data for analysis.		
Software license	Select the appropriate type of software license.		
Uses algorithmic soft-	Appears only when <i>Algorithmic software suite</i> is selected as a sub-type. Use this field to link the suite to any relevant algorithmic component records.		

ware component			
Version	Should contain the version designation associated with the software. This is often a numeral followed by a decimal and another numeral, for example, "2.1". For cases where there are multiple copies of the same software in a lab that are distinguished only by version number, they should be consolidated into one record, and the different version numbers captured on separate lines in this field, using the + function.		
Website(s)	The web address or addresses pertaining to the software, if applicable. Software URLs may be a page on the software producer's web site or a link to an open source page where a downloadable version of the software and related documentation is available.		
Comments	Not visible in search. Use this field for notes about the record or comments intended for reviewers. Possible uses include explanations for missing information in the record, or other notes about the annotation process.		✓
Curator Note	Not visible in search. Curators should use this field for notes about the record. While comments are not necessary for minor corrections such as typos, capitalization, migrating information to a different field, and so on; any major changes to the record should be documented along with the name or initials of the curator who made them.		✓