CHAPTER

2

GETTING STARTED IN CAARRAY

This sectionchapter introduces you to the caArray interface and its navigation as well as to global operations used in all of the caArray viewing windows.

Topics in this sectionchapter include:

- *Launching caArray* on this page
- *Requesting a User Account* on page 15
- *Using caArray Online Help* on page 16
- *Navigating through the caArray Workflow* on page 19
- *The caArray Interface* on page 20
- *Access to Public Data in caArray Before Login* on page 21
- *Elements of the caArray Viewer* on page 22

Launching caArray

Note: Internet Explorer 6.0 and Firefox 2.0 are both supported platforms for caArray 2.0. If you have questions about this, contact NCICB Application Support, http://ncicbsupport.nci.nih.gov/sw/.

The caArray application can be accessed from NCICB using the following URL: http://array.nci.nih.gov.

If a version of caArray 2.0 has been downloaded at your site, on the first download, you must install the software. For instructions about doing so, see your local administrator and/or refer to the *caArray Local Installation Guide* that can be downloaded from the caArray download page: http://ncicb.nci.nih.gov/download/downloadcaarray.jsp.

Note: If you are using a local installation of caArray, contact your Principal Investigator/Laboratory Manager/System Administrator for the correct URL for your use.

The Cancer Biomedical Informatics Grid™, caBIG™ program is developing tools for microarray data analysis and annotation. Several of these tools, for example, geWorkbench and GenePattern can be used to access and analyze data stored in caArray. A complete inventory of caBIG tools and resources is available at https://cabig.nci.nih.gov/inventory/inventory_a-z/document_view.

Browsing caArray Before Login

Once you are on the caArray Portal Welcome login page, without being logged in, you can browse caArray public data or you can perform a search of caArray public objects. (*Figure 2.1*).

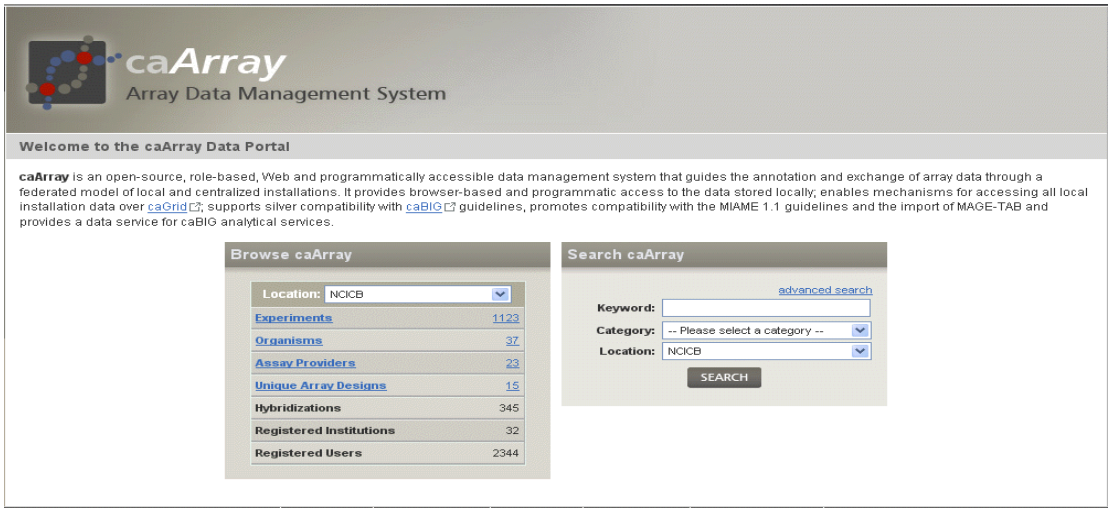


Figure 2.1 Prior to login, you can use these dialogs to browse or search the caArray database

The Browse caArray dialog box just left of the page center displays the number of objects that are accessible to a public audience saved in the database in each of the listed categories. The text categories shown in blue hypertext format can be clicked to open additional pages that display information about those categories. For more information about browsing the caArray database, see cross reference.

The Search caArray dialog to the right of page center allows you to launch a search of the caArray database for public objects. For more information about executing a caArray search, see *Searching the Repository* on page 85.

Note: Even though you can browse or launch a search prior to loggin in, your browse and search options are more inclusive once you have logged in.

caArray New User Account and Login

From the login screen, you can register as a new user or log in if you already have a user account (*Figure 2.2*):.

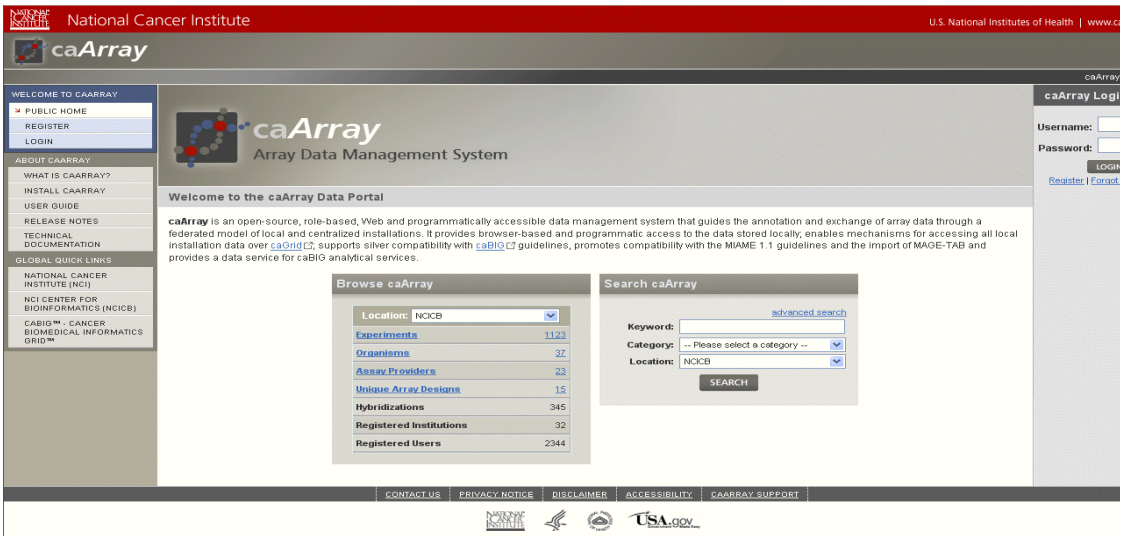


Figure 2.2 caArray login page

- If you already have a current valid caArray user account, enter the login information in the upper right corner of the page and click **Login**.

  or

- If you do not currently have a valid user profile, register for a new user account. See *Requesting a User Account* the following section for more information.

To log in, follow these steps:

1. Navigate to the caArray home page http://array.nci.nih.gov (*Figure 2.1*).
2. Enter user ID and password in the upper right corner of the page
3. Click **Login**.

   After caArray verifies your credentials, the application opens to the caArray workspace, providing access to all features allowed by the permissions granted to you. For more information about finding your way around caArray, see *Navigating through the caArray Workflow* on page 19.

Note: If you attempt unsuccessfully several times to login, (the number is determined by your local system), you are locked out of the system. A message is sent to you explaining that the account is locked, and you are given a link to application support team to request that they unlock the account. If you do nothing, caArray will be unlocked automatically after 30 minutes.

Requesting a User Account

To request a caArray user account, you must complete one of these steps:

- Go to the NCICB caArray login page http://array.nci.nih.gov , and click on the **Register** hypertext link, either in the left sidebar or under the caArray Login section in the upper right of the page. Enter the appropriate information in the

Register for an Account form. Click **Submit** to request the new account; click **Reset** to clear the form.

- As an alternative, contact NCICB Application Support:
  - NCICB@pop.nci.nih.gov
  - Phone 888-478-4423 (toll-free) or 301-451-4384 (local)

Once the request for a new account is sent to NCICB, it takes 24-72 hours to process. You will receive an email response when the account has been activated.

Note: Once you register, you have immediate accessibility to caArray, although your new account takes a period of time to process.

When your account is registered, the UserID and password you are assigned determines your access rights for the software.

Using caArray Online Help

The online help explains how to use all of the features of the caArray portal.

Note: You can open online help without being logged into caArray.

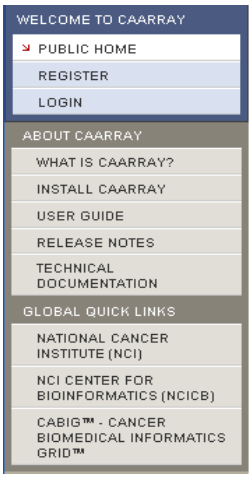
To access online help in caArray, click the **Help** menu option on the top menu bar to open the complete online help project.

Once you are in online help, several options help you locate topics of interest.

- Click the **Show in Contents** button ( ) at the top left of the help page to open the complete online help table of contents and locate your current topic in the table.
- The breadcrumb trail at the top of the page shows the relative location of the current help topic relative to neighboring topics. Click a breadcrumb link to display that help topic.
- Click the **Back** or **Forward** links at the top of the page to display help topics you have previously viewed.
- Follow hypertext links or the **Related Topics** buttons in the help topics to open other closely related topics. If the current help page has related topics associated with it, you can also view them by clicking the **Related Topics** button ( ) at the top right of the help page.
- Locate topics using the table of contents that displays in the left pane of the online help project or the **Index** tab that displays at the top of the Table of Contents pane.
- Perform word searches of Help by entering query text in the search text box.
- Print the current topic by clicking the **Print** button ( ) at the top right of the help page.

Note: caArray 2.0 does not have context sensitive help.

caArray Welcome Page Left Sidebar



The left sidebar of the caArray Welcome page provides links to an array of information.

The first three links...

The following four links direct you to various aspects of caArray documentation:

- What is caArray
- caArray Installation Guide
- caArray 2.0 User's Guide
- Release Notes
- caArray 2.0 Technical Documentation

Global Quick Links

The **Global Quick Links** on the left-hand navigation menu in most caArray viewers provide sources for caArray-related bioinformatics information on the Internet (*Figure 2.3*).

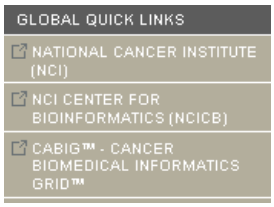


Figure 2.3 Quick Links menu options

These include links to the following websites:

- **National Cancer Institute (NCI)** (http://www.cancer.gov/)
- **NCI Center for Bioinformatics (NCICB)** (http://ncicb.nci.nih.gov/)
- **caBIG™ Cancer Biomedical Informatics Grid™** (https://caarraydb.nci.nih.gov/caarray/)

Permissions

This belongs in a different place.

caArray		Roles (Actors)									
		Anonymous User	Principal Investigator	Research Scientist	Lab Administrator	Lab Scientist	Biostatistician	System Administrator	Collaborator	System Time	External System
Use Cases	Acquire Experiment Data via API										
	Manage Experiment Data Files										
	Import Experiment Data										
	Submit Experiment Proposal										
	Download Experiment Data										
	Manage Experiment Permissions										
	Import Array Designs										
	Login										
	Manage Users										
	Navigate Repository										
	Search Repository										
	Search Using Filters										
	Manage Collaborators										
	Register for an Account										
	Report on Work Accomplished										
	Update Experiment Proposal										
	Import Data Files										
	Validate Experiment Data Files										

Table 1:

- **NCICB support** (http://ncicbsupport.nci.nih.gov/sw/) opens to a caArray project page; left in because workspace will probably have link to app support, though it

currently does not. NCICB Application Support subjects (with active hypertext links) display in the left-hand panel of the browser window (*Figure 2.4*).

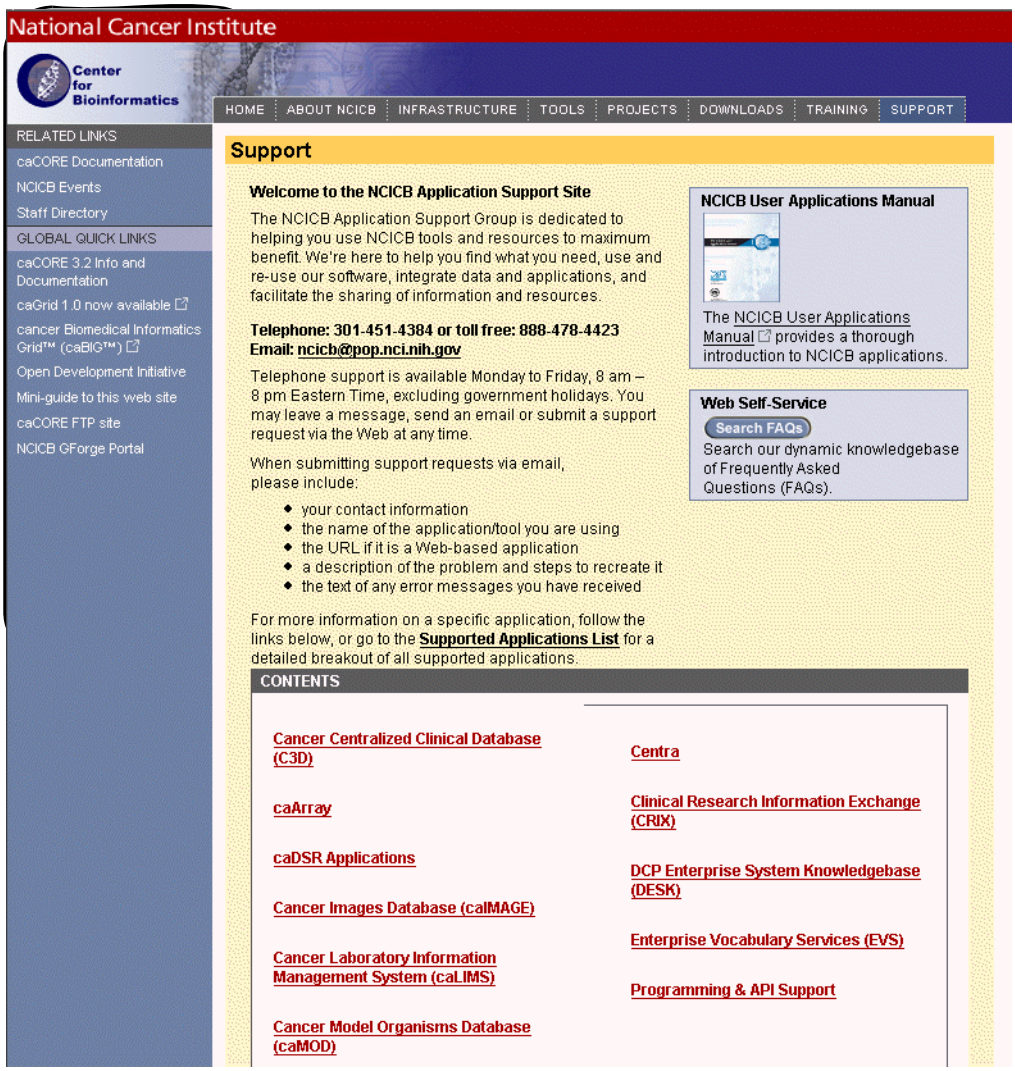


Figure 2.4 An example of the NCICB Quick Link help topic, in this case NCICB Application Support page.

Navigating through the caArray Workflow

Once you are on the caArray Portal Welcome login page, you can perform a search of caArray objects without being logged in.

See notes in the About caArray chapter about a workflow.

(Left in for now) Once you have logged in, caArray opens to the workflow page (*Figure 2.5*):

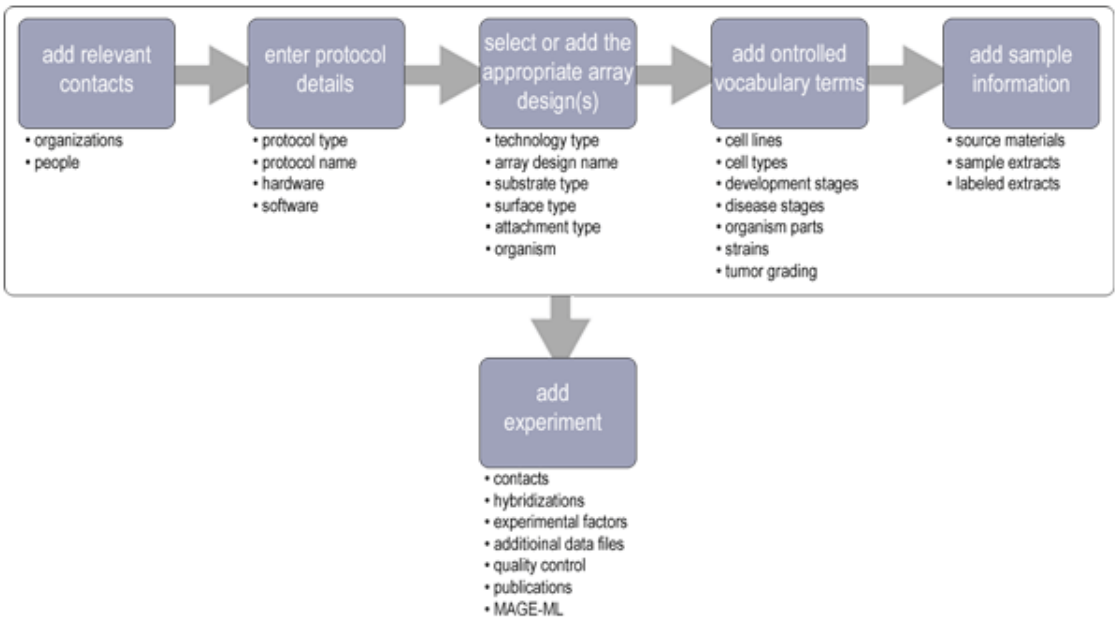


Figure 2.5 caArray Workflow

The workflow is designed to follow a logical flow of tasks as they should be completed in caArray. For more information about the workflow logic, see *caArray Workflow* on page 11. Each step in the workflow is described in its text; accompanying sub-topics represent objects that you can create in the corresponding section of caArray.

Each segment of the workflow figure (*Figure 2.5*) serves as a hypertext link to a corresponding caArray viewer. Click on your selection in the workflow to take you to the appropriate viewer(s) for completing your designated task(s).

The caArray Interface

The caArray provides a user-friendly interface to display options relating to the project in which you are working.

The three most common uses of caArray are the following:

- Submit new data, or modify existing data (with appropriate permissions)
- Search public or private data already in the caArray system
- User and group management (with appropriate permissions)

Access to Public Data in caArray Before Login

Elements of the caArray Viewer

Access to Public Data in caArray Before Login

Once you are on the caArray Portal Welcome login page, caArray allows any user, without logging in, the ability to browse or search any publicly-available caArray data. *Figure 2.1*).

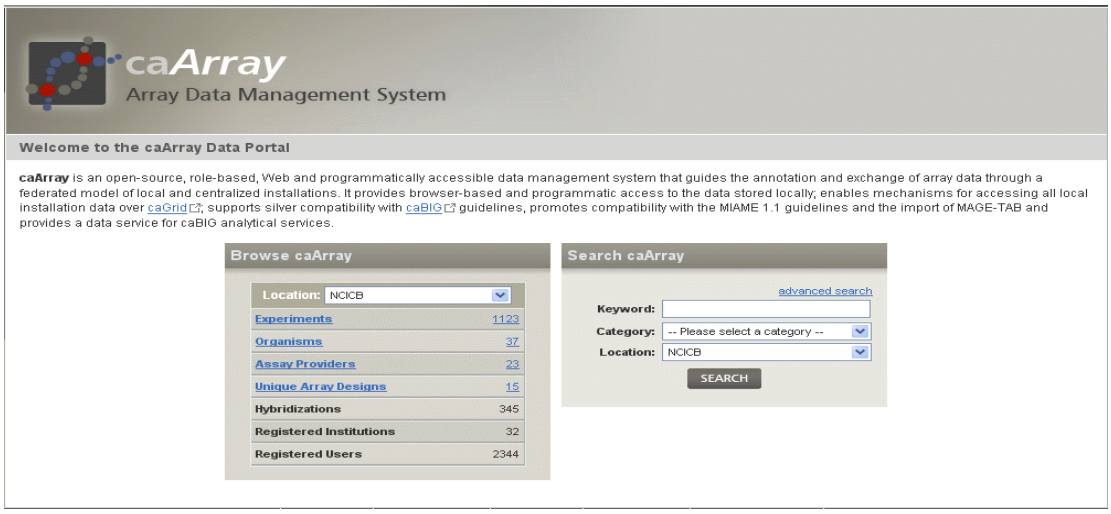


Figure 2.6 Prior to login, you can use these dialogs to browse or search the caArray database

The Browse caArray dialog box just left of the page center displays the number of objects that are accessible to a public audience saved in the database in each of the listed categories. The text categories shown in blue hypertext format can be clicked to open additional pages that display information about those categories. For more information about browsing the caArray database, see cross reference.

The Search caArray dialog to the right of page center allows you to launch a search of the caArray database for public objects. For more information about executing a caArray search, see *Searching the Repository* on page 85.

Note: Even though you can browse or launch a search prior to loggin in, your browse and search options are more inclusive once you have logged in.

Menu options for launching searches are more extensive if you log in, because then you will have access to all objects to which you have been granted visibility. Options allowing you to submit, view, modify, and add microarray experiment data to caArray are dependent on your user privileges, once you are logged in. See *Table 2.1* for more information.

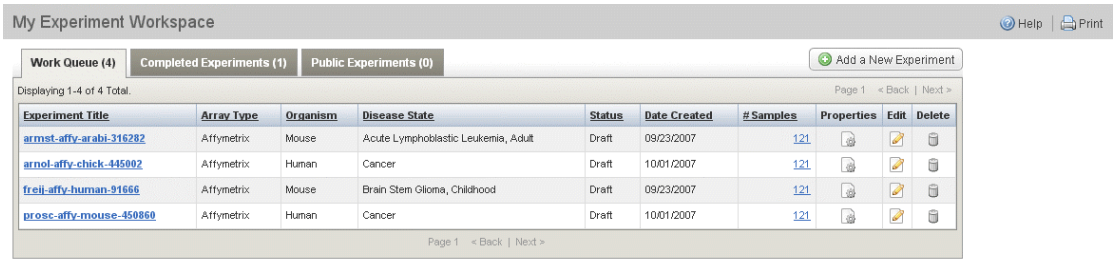
Note: You must obtain a user account from the help desk in order to log in. For more information, see *Requesting a User Account* on page 15.

The caArray Interface

Elements of the caArray Viewer

Elements of the caArray Viewer

Upon login, the Experiment Workspace displays in the viewer window.



The workspace displays three tabs:

1. Work Queue - proposed experiments in process of being created.
2. Completed Experiments - Proposed experiments that have been submitted for review
3. Public Experiments - Experiments that have been submitted and accepted into the caArray database

Will there be other tabs for people given private access to other Experiments? If so, what will they be called?

The listed Experiments on each tab are visible in table format, according to the permissions assigned to you. The column headings display fields populated with information for each corresponding experiment.

Define each:

Experiment Title

Assay Type

Organism

Status

Properties

Edit Status

When you click on an Experiment, ...

... and the menu choices on the left navigation menu correspond to the task tab or browser window you have selected or opened. **Is this ever true in 2.0??**

Left in for now: At the minimum, each task tab allows you to search and submit those items related to the task (when you are logged in).

Each of the tasks is described in separate sections chapters in this user's guideonline help.

Note: The available options depend on your user privileges (see *Security Structure Reword to reflect 2.0*). For descriptions of all interface features, see *Descriptions of Elements in the caArray Viewer**Table 2.1* .

Online help and additional resource links remain fixed through all the viewing windows.

Descriptions of Elements in the caArray Viewer

The terms in the following table*Table 2.1* identify and describe elements of a caArray browser window.

Term	*Definition*
Left Vertical Navigation Menu	Hypertext links associated with the caArray application, caArray documentation and Global Quick Links.
Online help	caArray documentation accessed from your computer screen providing help and answers for questions about using the software. **Note:** caArray 2.0 does not have context sensitive online help. You can open online help and use the TOC, index or perform a text search.
Standard toolbar	Displays at the top of every browser window
Browse caArray	The **Browse** dialog lists database object categories and the number of public objects in each categories. Click each hypertext link to browse details of the listed objects.
Search {caArray database objects}	The Search caArray dialog box allows you to launch a search of public object from the Welcome page. Enter keywords or select a category or location to define the search at a basic level. Click the Advanced Search hypertext link to add further criteria to the search. For more information about caArray searches, see *Searching the Repository* on page 85.
Interface	The caArray interface is a browser window, customized to correspond to task tabs or hypertext links you have selected.
Task tabs	Located across the top of some of the caArray browser windows. Task tabs represent the tasks you need to complete to create as components of an experiment
Experiments	One of the caArray task tabs. Comprised of a set of Experiment information and annotations performed on or associated with gene expression or SNP microarrays.
Organisms	Definition needed
Assay Providers	Definition needed In the caArray context, a person or an organization associated with an entry in the program
Unique Array Designs	Descriptions of microarrays that include such information as array layout and design and the technology used to create a microarray.
Hybridizations	The process of incubating one or more labeled extracts with an array. Hybridization methods form the basis for microarray techniques.
Registered Institution	Cancer center, academic institution, laboratory or commercial vendor with an established caArray account??
Registered Users	Person with a validated caArray User Account. May or may not be associated with a Registered Institution.

Table 2.1 Elements of the caArray browser window