Human Imaging Database (HID) User Manual

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How to use this Manual

This manual is organized such that you can read it chronologically or use it as a reference guide. If you would like to gain an introduction to the *HID web application*, begin with very basic information in Chapter 1, that describes a bit about how the HID works, how to gain access, login, and navigate the application. For a guide on how to manage and enter data in the HID, see Chapter 2. For performing queries of data in the HID, see Chapter 3. Chapter 4 provides a brief discussion of how to establish the standard practices you and your workgroup need to start using the HID. If, on the other hand, you are using the HID and need help with trouble-shooting, there are two suggested uses of this manual. First, you may locate a relevant chapter from the extensive Table of Contents above. Alternatively, you can locate from among the Figures provided at the end of the manual, a screenshot that resembles the screen on which you are experiencing trouble; a list of pages related to that screen will be provided below the Figure. The manual also includes a Glossary that which provides basic navigation and web application vocabulary as well as vocabulary specific to the HID and the BIRN infrastructure.

Chapter 1: HID web app General Overview

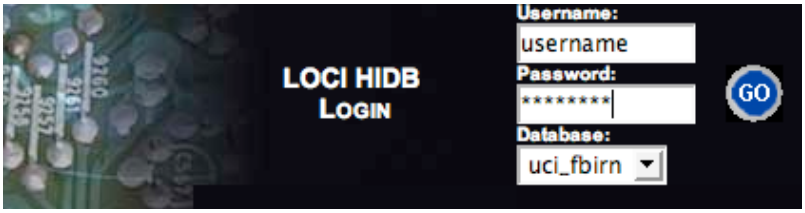
The *HID web app* is the web interface for the Function BIRN Human Imaging Database. This interface is designed to make it easy for you to enter, manage, and query data in the HID. The HID is a *virtual database* that combines individual data sources such that you experience access to a single integrated database. To learn more about how the BIRN HID *mediates* data sources for collaborative science, please see http://www.nbrin.net/research/data_integration/index.shtm.

1.2 Gaining access

Your local site will provide a website address (*url*) for access to the HID. In order to alter and manage data, you also need a user account with *data maintenance privileges*. Once you have received a user account with *data maintenance privileges* and a *url* from your local HID *web administrator*, you can login to the application.

1.3 Login

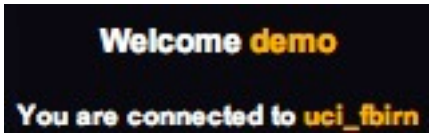
The login screen (See Figure 1.1) provides a summary of current features of the HID and a way to contact your local HID *web administrator*. The login form is located at the top right corner of the screen, (see the Detail below).



Detail: HID Login

You must enter your *username* and *password*. The "Database" drop-down menu provides a list of the data sources to which you have access. This list lets you know if you are gaining access to a single or multi-site *virtual database*. You should select the database for which you have *data maintenance privileges*. You do not need to select a different database site in order to gain access to it. All databases listed here will be available to you when you perform a *mediated* query (see Section 4.4.2).

Once you are logged in you will see a welcome message that will appear in the top right corner that will appear on all pages of the *HID web app,* confirming your HID database connection.



Detail: Welcome Message

1.4 HID icon legend

Upon login the HID will open to the HID *homepage* (See Figure 1.2). This screen provides a legend for the icons you will see on the HID web interface. The icons in this legend are active links that you can click on to navigate to that screen.

Simple Navigation Instructions:

Experiments		Subjects	
	Find/Query Experiments		Find/Query Subjects
	Add Experiment		Add Subject
	Edit Experiment		Edit Subjects
Visits		**Assessments**	
	Find/Query Visit		Find/Query Assessment
	Add Visit		Add Assessment
	Edit Visit		Edit Assessment

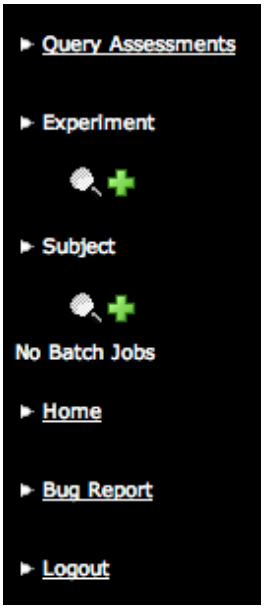
Detail: HID Icon Legend

To return to this *homepage* click on the "Home" link in the *navigation bar.*

1.5 Navigation

1.5.1 Navigation Overview

The *navigation bar* for the HID is a menu of links running vertically on the left-hand side of the webpage.

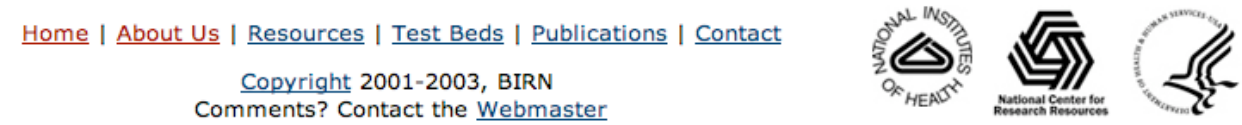


This *navigation bar* includes the following menu items: Query Assessments, Experiment, Subject, Home, Bug Report, and Logout. All menu items that are underlined are *active links* that can be clicked once to go to that screen.

The *navigation bar* may change as additional features are added to the HID.

The *header menu*:

and the *footer menu*:



provide links to information about BIRN, the BIRN resources, test beds and publications, as well as a way to contact BIRN, view the site map for the HID, and get help using the HID. There are also links to the websites of BIRN's sponsors: the NIH, NCRR, and DHHS for more information. These menus will be available on all screens of the *HID web app*.

Throughout the *HID web app* you will see different kinds of navigation links and items. *Active links* are menu items that are underlined; clicking on an *active link* will navigate you to a new screen for that item. *Scroll menus* are menus of items with a scroll bar on the right; in the *HID web app* you can often *double-click* on an entry in the *scroll menu* to navigate to a new screen for that item. *Pull down menus* are menus of items with a default menu item listed and a small downward facing arrow/triangle at the right side of the field; in the *HID web app* you can often select an item from a *pull down menu* to refresh the current screen with new information.

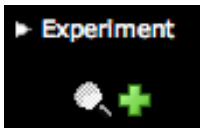
1.5.2 Query Assessments Menu

Clicking once on the Query Assessments link will bring you to the "Assessment Query Builder" screen (See Figure 3.1). For more information on how to use the "Assessment Query Builder," see Section 4.)

1.5.3 Experiments and Subjects Menus

For activities related to Experiments and Subjects click once on the icons under the menu item: the lookup icon (magnifying glass) , the add icon (plus sign) , and the edit icon (pen and paper) .

For experiment, study group maintenance, and subject enrollment, use the icons under the "Experiment" menu item.



Detail: Experiment Menu

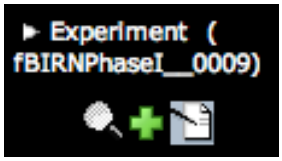
Clicking once on the *lookup icon* will bring you to the "Select Experiment" screen (See Figure 2.2). Clicking once on the *add icon* will bring you to the "Add Experiment" screen (See Figure 2.1).

For subject, visit, segment, and clinical assessment management, use the icons under the "Subject" menu item.

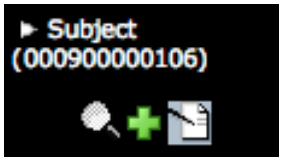
Detail: Subject Menu

Clicking once on the *lookup icon* will bring you to the "Find Subjects/ Select a Subject" screen (See Figure 2.7). Clicking once on the *add icon* will bring you to the subject addition screen (See Figure 2.6).

The *edit icon* will appear under the "Experiment" and "Subject" menu items in the *navigation bar* only if you have recently accessed a particular new or existing experiment or subject. The *experiment name* or *subject ID* of the experiment or subject that you have recently accessed will appear in parentheses by/under the "Experiment" and "Subject" menu items in the *navigation bar* (see Details below).



Detail: Experiment Menu - Editing



Detail: Subject Menu – Editing

Click on the *edit icon* to return to the screen for managing this experiment or subject. Click on the *lookup icon* or *add icon* to begin work on a different or new experiment or subject. For more information on how to manage, browse, and enter experiment and subject data, see Section 2.

1.5.4 Manage Jobs Menu and Batch Job Alert

The "Manage Jobs" menu item provides access to scheduled downloads of query results. For more information on scheduling downloads of query results, see Scheduling Downloads, section 4.6.

The Batch Job alert is directly above the "Manage Jobs" menu item and signals when scheduled downloads of Query results are ready for you to download to your local computer. The default alert is "No Batch Jobs."

1.5.5 Home, Bug Report, and Logout Links

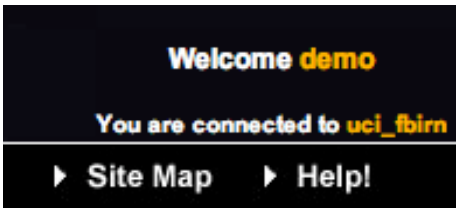
Click on the "Home" link to return to the HID *homepage* and the HID icon legend.

Clicking once on the Bug Report link will bring you to an external site to file a bug report.

Click on the Logout link to log out of the HID.

1.5.6 Help

Click the *help icon* (question mark) available on some screens of the *HID web app* for additional help specific to the screen you are on. You can also seek general help by clicking on the link at the top right of any screen under the login welcome message.



Detail: Help Link

1.6 Failed login

If log in fails you will remain on the login screen and will not gain access to the HID. This failure may be due to a mistyped *username* or *password* or to problems with your local site's hosting of the HID. Please try re-entering your *username* and *password* or contact your local HID *web administrator*.

1.7 Logout

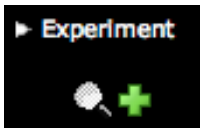
Logout by clicking on the Logout link at the bottom of the *navigation bar* on the left-hand side of any screen of the *HID web app*.

Chapter 2: Data Management

2.1 Experiment Management

2.1.1 Adding a new experiment

To add a new experiment, press the *add icon* in the Experiment section of the *navigation bar* or the HID icon legend on the *homepage*.



Detail: Experiment Menu

This will take you to the "Add Experiment" screen (see Figure 2.1). To add an experiment, provide the mandatory experiment name, select the contact person from the available contacts dropdown menu, provide an optional experiment description, and press the "Add" button.

2.1.2 Maintaining an existing experiment

First click the *lookup icon* in the Experiment section of the *navigation bar*, to go to the "Select Experiment" screen (Figure 2.2). Then, *double-click* on the experiment name you want to maintain from the *scroll menu* of available experiments. This will take you to the "Experiment Information" screen (See Figure 2.3) where you can manage the experiment.

On the upper half of the "Experiment Information" screen you should see the *experiment name*, contact name, date the experiment was last modified, and the optional experiment description. You may edit the contact name and experiment description. Click the "Update" button to save any changes to the experiment information. On the lower half of this screen you will see the subjects currently enrolled in the experiment including their study groups. Here you can enroll new subjects, unenroll a subject, change an enrolled subject's study group or add a new study group.

2.1.2.1 Adding a new study group

From the "Experiment Information" screen (see Figure 2.3), press the "Add Study Group" button to add a new study group. This will take you to the "New Study Group" screen (Figure 2.4). To add a study group, select the research group type from the *dropdown list*, provide the name of the new study group, provide an optional study group description and press the "Add" button at the bottom right of the screen when you are done.

2.1.2.2 Enrolling a new subject

From the "Experiment Information" screen (Figure 2.3), press the "Enroll" button to enroll a new subject in the experiment. This will take you to the "Subject Enrollment" screen (see Figure 2.5). To enroll a subject, select the subject from the "Available Subjects" *scroll menu*, and then select the study group the subject will be in from the "Subject Groups" *scroll menu* and press the "Enroll" button.

2.1.2.3 Unenrolling a subject

From the "Experiment Information" screen (Figure 2.3), select the subject you wish to unenroll from the experiment from the "Enrolled Subjects" *scroll menu*, then press the "Unenroll" button. You can only unenroll one subject at a time. A confirmation dialogue will pop-up asking you whether you are sure that you want to unenroll this subject. This is an extra precaution to protect you from losing the data entered for a subject in this study. Click "yes" if you wish to continue unenrolling the subject.

2.1.2.4 Change the Study Group for a Subject

From the "Experiment Information" screen (Figure 2.3), you can view the list of subjects enrolled in the experiment in the "Enrolled Subjects" *scroll menu*. To the right of the ID number for each subject listed here, the Study Group will be provided in parentheses (if there is no study group provided it will be listed as "null"). Select a subject from the "Enrolled Subjects" *scroll menu* and then select a study group from the "Study Groups" *pull down* list and press the "Change Group" button to move this subject to the selected Study Group.

2.2 Subject/Visit/Segment Management

2.2.1 Adding a new subject

To add a new subject press the *add icon* in the Subject section of the *navigation bar*.

Detail: Subject Menu

This will take you to the subject addition screen (see Figure 2.6). To add a subject, press the "Create SubjectID" button to create a new unique BIRN ID for your subject. You may also enter a date of birth, a Local ID and a subject name. These fields are optional but recommended; see the section on Best Practices (Section 5). The Local ID and subject name are *protected data*, which means that only users of the HID at your local site will be able to view this information.

2.2.2 Maintaining an existing subject

To maintain an existing subject, press the *lookup icon* in the subject section of the *navigation bar.* This will take you to the "Find Subjects / Select a Subject" screen (see Figure 2.7). To maintain a particular subject, locate the subject in the "Select a Subject" scroll menu and *double-*

click on the subject ID to go to the subject management screen (See Figure 2.8). You can also use the search feature to help you find the subject.

Detail: Subject Lookup Search Feature

This will provide you with a set of search results (see Figure 2.9). From the search results, click the "Edit" button to the right of the subject you wish to maintain.

2.2.2.1 Adding a new visit

From the subject management screen (Figure 2.8), press the "New Visit" button. This will take you to the "New Visit" screen (Figure 2.10). Provide the mandatory visit date and select a visit type from the *pull down* list. Providing a visit name and description are optional but recommended (see Section 5 for a discussion of Naming Practices). Click the "Add" button to save the new visit. Once you have added a visit for this subject, the visit and its information will be visible on the subject management screen and buttons to add or maintain studies and study segments will also appear (see Figure 2.8b)

2.2.2.2 Editing an existing visit

From the subject management screen (Figure 2.8), select a visit by choosing the visit date from the "Visit Date" *dropdown list*. This will bring up the information for this visit. Click the "Edit" button to edit this visit. You should now see the "Visit Management" screen (Figure 2.10), where you edit the visit parameters. Press the "Update" button when done.

2.2.2.3 Adding a new study or study segment

Once you have added a visit, you can add a new study or study segment by clicking the "New Study" or "New Segment" buttons on the subject management screen (Figure 2.8b). You do not need to create any studies in order to create study segments, but it is recommended that you adopt standard practices with your workgroup (for more information on Best Practices, see section 5). Segments are a subset of studies; if you create a segment without creating a study, the segment will be considered to belong to a study named "Default Study."

Click on the "New Study" button to go to the "Study Management" screen (see Figure 2.11). Provide an optional study name and description. Change the mandatory time value to match the time of the study you are adding. Below you will also see space to enter information about a study segment. Fill in the optional name and description. Provide a date; the date by default will be the same as the Study date. Choose an optional protocol from the *pull down menu*, and press the "Add Study" button.

If you are adding the first study segment and have not created a study, click on the "New Segment" button. This will take you to the "New Segment" screen (see Figure 2.12) where you can change the default value of the mandatory time value to match the time of the visit segment

you wish to add. Provide an optional segment name, protocol, and description, and press the "Add Segment" button to save this segment. You will now have a study named "Default Study."

If you are adding an additional study or study segment to a study, the existing studies and segments will be listed on the subject management screen (Figure 2.8c). To select a particular visit, choose the date of the visit from the "Visit Date" *pull down menu*. You can view different studies in the visit by selecting the study name from the "Study Name" *pull down menu*. It may take a brief moment for the screen to update the information for the selected visit or study. From this screen you can add a new study to the selected visit, edit the existing studies, or click "Manage" in the "Segments" section of the screen to add a new segment to the selected study. To add a new segment to the selected study, click the "Manage" button. This will take you to the "New Segment" screen (Figure 2.12). Change the default value of the mandatory time value to match the time of the visit segment you wish to add. Provide an optional segment name, protocol, and description, and press the "Add Segment" button to save this segment.

If you are adding an additional segment to a study the "Segment Management" screen will show information about existing segments (see Figure 2.12b). Click the "New Segment" button; this will take you to the "New Segment" screen (see Figure 2.12). Change the default value of the mandatory time value, provide an optional segment name, protocol, and description, and press the "Add Segment" button to save.

2.2.2.4 Editing an existing study or study segment

In the subject management screen (Figure 2.8c), press the "Manage" button in the "Segments" section of the screen, to arrive at the "Segment Management" screen (Figure 2.12b). Choose the segment you wish to edit from the segment date and time *dropdown list* then click the "Edit" button to arrive at the "New Segment" screen (Figure 2.12) for that segment. Make any edits to the parameters of the segment and press the "Save" button to make the changes permanent.

2.2.2.5 Adding a clinical assessment

Once you have at least one visit and at least one segment, click the "Manage" button in the segments section of the subject management screen (Figure 2.8c). This will take you to the "Segment Management" screen (2.12b). Choose the segment to which you wish to add an assessment from the date and time *dropdown list*. Next, choose an assessment type from the *dropdown list* of assessments just before the "Add Assessments" button and click the "Add Assessment" button. If you already have an existing assessment, the name of the existing assessment will be listed with some data from the assessment (see Figure 2.12c). Follow the same procedure described above to add another assessment.

You will arrive at the cover page of the selected assessment (Figure 2.13). On this screen there are always 5 mandatory fields, namely:

- Date – the date, in mm/dd/yyyy format, the assessment is done (which is the same as the date of the segment);
- Time – the time, in hh:mm military time format i.e. 13:45 and 01:45 are 12 hours apart.

- Informant ID – the BIRN ID for the informant
- Informant Relation – the relation of the informant to the subject.
- Clinical Rater

Press the "Next" button at the bottom of the screen to go to subsequent pages of the assessment if any exist. Click "Previous" to go back to a previous page in the assessment. Click the "Submit" button on the last page of the assessment to exit the assessment. All "Next," "Previous," and "Submit" buttons save data already entered. After each assessment page, the data entered so far is saved to the database. You may leave an assessment and return later to continue data entry on an existing assessment.

For questions in the assessment data that are left unanswered, use the *pull down* list provided to the left of the question heading to provide a reason why the question was not answered.

2.2.2.6 Editing a clinical assessment

From the subject management screen (Figure 2.8c), select the visit and study for the segment that contains the assessment you wish to edit and clicking the "Manage" button in the "Segments" section of the screen. This will take you to the "Segments Management" screen (Figure 2.12c). Next, select the segment that contains the assessment you wish to edit from the segment date and time *pull down menu* and click the "Edit" button next to assessment you wish to edit, in the "Assessments" section of the screen. (You can hide or reveal the assessment details by clicking the minus or plus sign , respectively, to the right of the assessment name.) You may then make changes to the assessment data and follow the "Next" button at the bottom of the screen to continue editing data, if there are multiple pages in the assessment. To go back to a previous page, click the "Previous" button at the bottom of the screen. On the last page of the assessment click the "Submit" button when done. All "Next," "Previous," and "Submit" buttons save data already entered. After each assessment page, the data entered so far is saved to the database. You may leave an assessment and return later to continue data entry on an existing assessment. From the "Segments Management" screen (2.12c) you can also delete an existing assessment or add a second entry of the same assessment. For more information on double data entry support, see the following section, Section 2.2.3.

2.3 Double Data Entry Support

The *HID web app* provides support for double data entry. This means that you can use the HID to protect against human error in data entry. This is particularly useful for entering data from paper forms where there can exist some ambiguity in the written entries. To utilize this feature of the *HID web app* follow the instructions in Sections 2.2.2.5 and 2.2.2.6 to add an assessment and enter the assessment data.

2.3.1 Completing Double Data Entry

Once you have entered the assessment data for the first time and clicked the "Submit" button, you will be able to complete double data entry for this assessment. To complete double data

entry for an assessment, locate the assessment by selecting the visit and study for the segment that contains the assessment, on the subject management screen (Figure 2.8c) and clicking the "Manage" button in the "Segments" section of the screen. This will take you to the "Segments Management" screen (Figure 2.12b). Next, select the segment that contains the assessment for which you wish to complete double data entry from the date and time *pull down menu*. In the "Assessments" section you should see the existing assessments and their details. (To hide or reveal the assessment data details click the minus or plus sign, respectively, to the right of the assessment name.) Locate the assessment name of the assessment for which you wish to complete double data entry and then click the "Add Second Entry" button on the right hand side of the screen. You may then make changes to the assessment data and follow the "Next" button at the bottom of the screen to continue editing data, if there are multiple pages in the assessment. To go back to a previous page, click the "Previous" button at the bottom of the screen. On the last page of the assessment click the "Submit" button when done. All "Next," "Previous," and "Submit" buttons save data already entered. After each assessment page, the data entered so far is saved to the database. You may leave an assessment and return later to continue data entry on an existing assessment.

2.3.2 Editing The Double Data Entry

You can edit the second data entry in the same way that you edit the first. From the subject management screen (Figure 2.8c), select the visit and study for the segment that contains the assessment you wish to edit and clicking the "Manage" button in the "Segments" section of the screen. This will take you to the "Segments Management" screen (Figure 2.12c). Next, select the segment that contains the assessment you wish to edit from the segment date and time *pull down menu*. You will see a list of existing assessments in the "Assessments" section of the screen. (You can hide or reveal the assessment details by clicking the minus or plus sign, respectively, to the right of the assessment name.) There will be an "Edit" button and an "Edit Second Entry" button. Click the "Edit" button to make changes to the first assessment data entry. Click the "Edit Second Entry" to make changes to the assessment data entered second. You may then make changes to the assessment data and follow the "Next" button at the bottom of the screen to continue editing data, if there are multiple pages in the assessment. To go back to a previous page, click the "Previous" button at the bottom of the screen. On the last page of the assessment click the "Submit" button when done. All "Next," "Previous," and "Submit" buttons save data already entered. After each assessment page, the data entered so far is saved to the database. You may leave an assessment and return later to continue data entry on an existing assessment.

2.3.3 Reviewing Double Entries

You can compare the data entered through Double Data Entry support by clicking on the "Entries" button in the "Assessments" section of the "Segments Management" screen (Figure 2.12c). This will take you to the "Show Entries" screen (see Figure 2.14). Here you can view the data entered for the assessment in "Entry 1" and "Entry 2." Missing values will be noted at the top of the screen in the "Missing Values and Entries" section. This section will note the question and score name for the value that was not answered, and the entry from which it was missing. If you note discrepancies you may investigate them and then make changes accordingly by editing the necessary entry or entries. To edit the entries, see Section 2.2.2.6 or 2.2.3.2.

Chapter 3: Data query

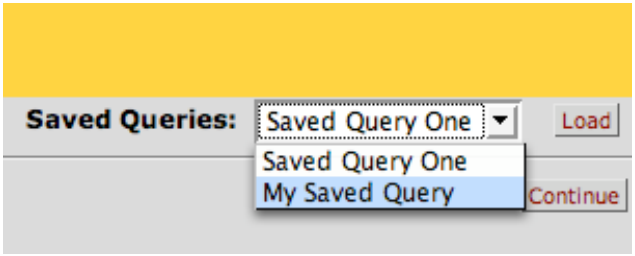
3.1 Assessment Query Builder Overview

The Assessment Query Builder (see Figure 3.1) is available by clicking on the "Query Assessments" link in the *navigation bar* or by clicking on the *lookup icon* under "Assessments" in the *icon legend* on the *homepage*. The Assessment Query Builder allows you to build a query of all data sources available to you through the HID and to narrow down to data that is interesting or meaningful to you.

3.2 Building a Query

3.2.1 Assessment Selection

The first screen of the Assessment Query Builder (Figure 3.1) is the "Assessment Selection" screen. This screen provides a full list of assessment types with a brief description of each, where provided. Select by clicking the checkbox next to each assessment type you wish to include in your query. You must select at least one item from this list. Next, click the "Continue" button located at both the bottom and top of the screen. You can also load a query that saved during a previous session of the Assessment Query Builder by selecting the query name you provided from the "Saved Queries" dropdown list and clicking the "Load" button. (See Figure 3.2) If you have no previously saved queries the Saved Queries drop-down menu (see Detail below) will not appear.



Detail: Loading a Saved Query

3.2.2 Score Selection

After selecting assessment types to include in your query and clicking the "Continue" button on the "Assessment Selection" screen of the Assessment Query Builder (Figure 3.1) you will arrive at the "Score Selection" screen (see Figure 3.2 for an example). This screen will list all of the assessment types that you chose on the "Assessment Selection" screen with a list of possible scores for each assessment. Select by clicking the checkbox next to those scores you wish to include in your query. You must select at least one item from this list. You can return to the "Assessment Selection" screen to make changes to the assessment types you have included in your query by clicking the "Previous" button. If you are ready to proceed with your current selection of assessment types and scores, press the "Continue" button.

3.4.3 Query

Once you have completed the selection of assessment types on the "Assessment Selection" screen (Figure 3.1) and the selection of scores on the "Score Selection" screen (Figure 3.2), the Assessment Query Builder has now derived a data selection based on these criteria (see Figure 3.3 for an example) and you are on the "Query" screen (Figure 3.3). From this screen you can save, narrow, and/or run your query.

3.3 Saved Queries

3.3.1 Saving a Query

On the "Query" screen (Figure 3.3) you can save a query by clicking the "Save Query" button at the top left side of the screen. This will take you to the "Save Query" screen (Figure 3.4). Provide a unique name for your query in the "Query Description" field. You will use this name to access your saved query in the future. Below this field, a list of "Available Saved Queries" will appear if you have previous saved queries. Re-using a query name from this list will result in the replacement of your previous saved query with the current query you are saving. Press the "Save Query" button when you are done providing a description. This will save your query, including your selection of assessment and score criteria, so that you can run or modify it at a later time. Press the "Cancel" button if you wish not to save your query or if you would like to return to previous screens to make any changes to the assessment types and scores you have included in your query. Use the "Previous" and "Continue" buttons to navigate to the different pages of the Assessment Query Builder to make any desired changes, then proceed to the "Save Query" screen when you are ready.

3.3.2 Loading a Saved Query

On the first screen of the Assessment Query Builder (the "Assessment Selection" screen) a "Saved Queries" dropdown list will appear at the top of the screen if you have any previous queries saved (see Figure 3.5). Select the query name you provided from the "Saved Queries" dropdown list and click the "Load" button. This will automatically load the assessment types from the list that you included in your saved query. Click the "Continue" button to proceed to the "Score Selection" screen (Figure 3.2) or you may first make modifications to the loaded selection of assessments. The saved query will also automatically load the saved selection of scores to include in your query. Click the "Continue" button to proceed to the "Query" screen or you may first make modifications to the selection of scores. You can now run a query on your saved query data set by narrowing in on a particular experiment or set of experiments and/or by narrowing in on a particular set of score values. If you have modified the selection of assessments or scores to query you can save this new derived data selection by clicking the "Save Query" button. Please see "Saving a Query" (Section 3.3.1) for instructions on saving and naming your query.

3.3.3 Making changes to a Saved Query

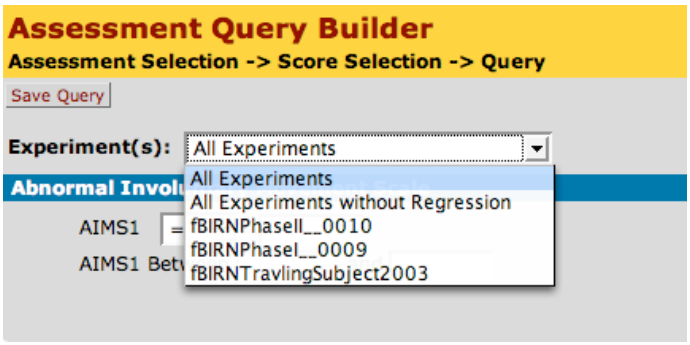
After loading a saved query, you can add or remove assessment types or scores from the selection on the "Assessment Selection" and "Score Selection" screens (Figures 3.1 and 3.2). However, these changes will not automatically be saved to the query for future use. To save the new selection for future use you must save it as a new query. By saving the query under the same name the modified query will replace the original query you loaded.

3.4 Running a Query

Once you have completed the selection of assessment types on the "Assessment Selection" screen (Figure 3.1) and the selection of scores on the "Score Selection" screen (Figure 3.2), the Assessment Query Builder has now derived a data selection for you to query. Click the "Continue" button on the "Score Selection" screen of the Assessment Query Builder to arrive at the "Query" screen (Figure 3.3). When you are ready to run the query, click the "Query" button, which will provide you a page of results.

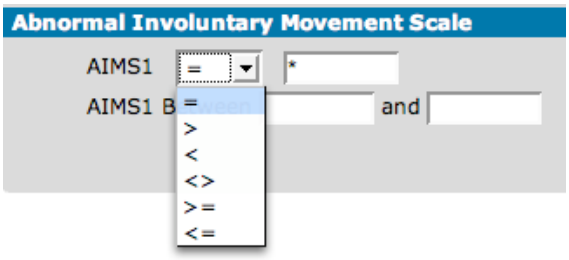
3.4.1 Narrowing Your Query

From the "Query" screen (Figure 3.3), you can narrow your query by selecting a particular experiment or set of experiments from the "Experiments" dropdown list.



Detail: Narrowing by Experiment

You can also narrow your search by selecting and entering particular values for the scores on each assessment type you have chosen to include in your query in the fields provided. You will often have a *pull down menu* to select a modifier for the variable such as less than, greater than, or equal to. At times the variable will also be a *pull down menu* of values.



Detail: Choosing Variables and Modifiers

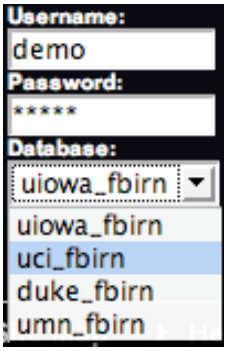
If you have selected multiple scores for your query you will have the option to search by all or any of any of the scores by using the And/Or buttons provided above each score variable.

Detail: Modifying the type of Inclusion in the Query

If you would like to return to the previous screens to change the selection of assessment types or scores to include in the query, click the "Previous" buttons. When you are ready to run the query, click the "Query" button, which will take you to the Query Results screen (see Figure 3.6).

3.4.2 Mediated Query

A *mediated* query is one that searches through, not only your local HID, but also the HID databases of remote collaborator sites. The *mediated* query provides you with search results from different sites in a single set of query results. To perform a *mediated* query, you must be connected to multiple sites. From the login screen (Figure 1.1) you can click to view the "Database" *pull down menu* that is provided below the username and password entry form.



Detail: Multi-site Database Connection

You do not need to select a particular database from this list in order to gain access to it. In fact, you must only select the database that is your local HID during log in. However, this *pull down menu* confirms for you the sites to which you have access when performing a *mediated* query.
If you are connected to multiple database sites, you will be able to perform a *mediated* query from the "Query" screen (see Figure 3.3b) of the "Query Assessment Builder," (see Section 3.2 to learn how to build a query). On this screen you will see both a "Query" button and a "Mediated Query" button. Click the "Query" button to perform a search of just your local HID. Simply click the "Mediated Query" button to perform your search on all databases to which you are connected. This will take you to the Query Results screen (Figure 3.6). Again, you will only see the "Mediated Query" button, if you are connected to multiple sites. If you do not see it (see Figure 3.3), contact your local *web administrator* to ask for a multi-site connection.
Using the "Mediated Query" will produce the same Query Results screen as in a regular query. See information about understanding your Query Results in section 3.5, which describes how to browse and analyze results. The only difference between the Query Results screen (Figure 3.6) and the *mediated* Query results screen (Figure 3.6b) is that you will see different sites listed in the "Site ID" column.

3.5 Query Results

Once you have run a query you will arrive at the Query Results screen (see Figure 3.6 or 3.6b for *mediated* query results). This screen provides a list of derived data that matches the selections you have made in the Assessment Query Builder. The list will include the Subject ID number, the experiment name, the visit number and date, the segment number, the site ID for the HID database where the data resides, and the values that matched your search. If there are no results from your query an error message will appear.

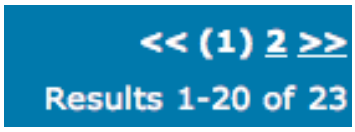
From this screen you can explore the derived data, run some statistical analysis on the derived data using the tools on this screen, or download the derived data for analysis on your local computer using your own methods and tools. In order to download the derived data to your local computer the data must first be downloaded to the web server that is running your local *HID web app*. Only then can you download from the HID to your local desktop. This process is managed by the "Batch Job Manager" (See Section 3.6).

3.5.1 Understanding Your Query Results

The Query Results screen (Figure 3.6) includes a list of data matching the criteria you selected when building your query through the Assessment Query Builder. This screen reveals what data in the database match your criteria. From this screen you can browse some *metadata* about the results, run statistical analyses through the *HID web app*, or schedule downloads of the data to your local computer for further exploration and analysis. To gain access to the data you must first download it (See Downloading Your Data, Section 3.6). However, the *HID web app* provides some tools for you to browse and analyze. You can use these features to explore the data or to help you narrow down what data to download.

3.5.2 Browsing Your Query Results

You can browse through some *metadata* about your query results from the Query Results screen (Figure 3.6). This screen includes a list of the data that match your criteria from the Assessment Query Builder. The list provides the Subject ID, Experiment Name or Description, Visit number, Segment number, Visit Date, and Site ID for all results. It also lists all of the values for the Assessments and Scores you selected in the Assessment Query Builder. You can export this list as an excel file (comma-separated value format) by clicking on the "Export CSV" button at the top middle of the screen. The list may continue onto multiple pages. You can see the number or results in this list by viewing the alert at the top right corner of the screen, which also provides the number of pages of results. You can navigate through the pages by clicking on a page number to go to that page or by using the double >> for the next screen and the double << for the previous screen.



Detail: Navigating Multiple Pages of Results

You can also view *metadata* about each Subject that was returned by your Query. Click on the Subject ID number, which is an *active link,* to see details about each subject. This will take you to the Subject Visit Information Screen, which provides a list of all visits for this subject and experiment (see Figure 3.7). The list includes the Visit Type, Visit Date, Visit ID number, Segment ID number, Protocol, Protocol Version, and Study type.

Click the "Show Detail" button in the upper right corner of the screen to view details about the Segments that matched the criteria from your query. Clicking this button will reveal details about the Assessment and Score values for these Segments (see Figure 3.7b). Click the "Hide Detail" button in the upper right corner of the screen to hide these details.

For MRI Scans or other image data a thumbnail image, where available, will appear in the Subject screen list. All image data will most likely be listed under a special Visit Type (e.g. MRI Scan Visit); see section 4.2 on Naming Practices. A message will also explain how to download the series of images for that visit. You can download the images series by clicking on the "Download as AFNI BRIK" button or you can explore the image series directly through the *HID web app* by clicking on the "Browse Image Data" button.

3.5.3 Analyzing Your Query Results

The *HID web app* provides some statistical analysis tools to perform on your Query results without requiring you to download the data to your computer. Alternately you can schedule a download of some or all of your Query results so that you can analyze them on your local computer with your own statistical software tools. To download your data see Downloading Your Query Results, section 3.6).

To use the statistical analysis tools provided in the *HID web app* click the "Explore Data" button at the top left corner of the Query Results screen (Figure 3.6). This will take you to the "Data Exploration" screen (see Figure 3.8).

From the "Data Exploration" screen you can choose the type of Statistical analysis to run, Univariate or Bivariate, from the "Stats" *pull down menu*.

3.5.3.1 Univariate Analysis

From the "Data Exploration" screen (Figure 3.8), select "Univariate" from the "Stats" *pull down menu* (Univariate will be selected by default, if you have changed it to Bivariate, the screen may take a moment to load the Univariate statistics options, Figure 3.8b) Select which factor(s) to include in the analysis using the "Continuous" and "Discrete" *pull down menus* provided in the "Factors" section of the screen. If you wish to select more than one factor, hold down the command/Apple key while clicking on your selection.

Select the type of output by checking the box next to the desired output type(s) in the "Output Selection" section of the screen. Output types that are not available will appear flatter and you will not be able to check these types.

When you have completed your selection of factors and output, click the "Continue" button at the bottom left corner of the screen. This will take you to the "Univariate Statistics Results" screen (see Figure 3.9). To return to the Query Results screen, press the "Back to Search Results" button at the bottom left corner of the screen.

3.5.3.2 Bivariate Analysis

From the "Data Exploration" screen (Figure 3.8), select "Bivariate" from the "Stats" *pull down menu* (Univariate will be selected by default). The screen may take a moment to load the Bivariate statistics options (see Figure 3.8b). Select one independent variable and one dependent variable from the corresponding *pull down menus* in the "Variable Selection" section of the screen. Select a type of output from the "Output Selection" section of the screen.

When you have completed your selection of variables and output, click the "Bivariate Stats" button at the bottom left corner of the screen. This will take you to the "Bivariate Statistics Results" screen (see Figure 3.10). To return to the Query Results screen, press the "Back to Search Results" button at the bottom left corner of the screen.

3.6 Downloading Query Results

There are two kinds of data to download to your local computer: query data results and subject image results. Batch Queries are used to download query data results and Data Bundles are used to download subject image results. You can also download image results one at a time instead of in bundles. A Batch Query allows you to download full assessment data sets for the subjects that resulted from your Query. A Data Bundle allows you to select specific Subject image data by adding it to a Shopping Cart of data and checking out when you are ready to schedule a download.

3.6.1 Scheduling Downloads

It is important to understand that the *HID web app* allows you to browse and explore the data resulting from your Query, however in order to download the resulting datasets you must first schedule a download. This is because the data that you can browse and explore is in the form of *metadata* which is accessible due to the HID's software which tracks this *metadata*. To download the datasets to your local computer the HID must first download the dataset to the local web server from the site where the data resides. Because the speed of this download depends on your server as well as those at the data site, the *HID web app* allows you to schedule a download that will occur even if you are logged out of the *HID web app*. You can wait for this download to complete and then download the results from the HID to your local computer. You may also logout and return later to download the results to your local computer.

3.6.2 Batch Queries

The Batch Query allows you to download full assessment data sets for the subjects that resulted from your Query. These subjects are those listed on the Query Results screen (Figure 3.6) that match your criteria selected in the Assessment Query Builder. To run a Batch Query, click on the "Batch Query" button at the top left corner of the Query Results screen. This will take you to the "Batch Query Submission" screen (see Figure 3.11). Provide a description or name for your Batch Query in the "Description" field. Select which Assessments you would like to download for the subjects that matched your Query. When you are ready click the "Batch Query" button at the bottom right corner of the screen.

Once you have completed your Batch Query submission you will be returned to the Query Results screen. A message on the *navigation bar* above the "Manage Jobs" menu item will alert you to the number of Batch Jobs you have scheduled or that are ready for you to download.

3.6.2.1 Batch Job Alert

This alert message will read "No Batch Jobs" if there are no Batch Jobs scheduled.

Detail: Batch Job Alert - Off

If there are a number of Batch Jobs ready, the alert message will become red and will state the number of new results.

Detail: Batch Job Alert - On

3.6.3 Downloading Image Data Results

3.6.3.1 Data Bundles

Data Bundling allows you to download image data for particular subjects that resulted from your Query. The Query Results screen lists all subjects that match your criteria selected in the Assessment Query Builder. To select a subject for a Data Bundle, use the *shopping cart icon* . Clicking once on the *shopping cart icon* to the right of a subject will add this subject to your Data Bundle Shopping Cart. In the upper right corner of the Query Results screen you will see the Data Bundle Shopping Cart . An alert message to the right of the Shopping Cart will inform you of how many items you currently have in your Cart.

Click once on the Shopping Cart to view your Data Bundle Shopping Cart contents. This will take you to the Shopping Cart Management screen (see Figure 3.12).

3.6.3.2 Shopping Cart Management

After adding Subject data to your Shopping Cart on the "Query Results" screen (Figure 3.6), you can proceed to the Shopping Cart Management screen (Figure 3.12) by clicking on the Shopping Cart Icon at the top right corner of the screen . On this screen you will see a list of all the

Subject data that you have placed into your Shopping Cart. Each data item will be listed by Subject ID number and a *navigation tree* allows you to view the experiments, visits, assessments/segments, and score variables included for each subject. Clicking on the plus sign will reveal more details (see Figure 3.12b) and clicking on the minus sign will hide details. It may take a moment for the Shopping Cart contents list to populate with details. If no details are available this is because these Subjects' data contain no image data.

You can remove data items from your shopping cart by clicking on the Remove icon provided for each item on the right hand side of the page

. You can leave the items in the shopping cart and return to download them at a later time during your current HID session (i.e. these items will not be saved if you log out of the HID). You can also create a Data Bundle to schedule the download of some or all of the data items in your cart. Remember that the Data Bundle first has to download to the local web server from the BIRN site at which it is located before you can download it to your local computer.

3.6.3.3 Creating a Data Bundle

From the Shopping Cart Management screen (Figure 3.12) you can create a Data Bundle. To create a Data Bundle and schedule a download of the data to your local HID web server, you must first provide a name for the Data Bundle in the "Bundle Name" field at the top of the screen. (This name will be used to identify your Bundle on the "Manage Jobs" screen when the Data Bundle is ready for you to download to your local computer.) Next, you must select which data items in your Cart to include in the Bundle. Click on the checkbox to the left of the Experiment Name to include the entire experiment for a Subject in your Bundle. If you wish to include only particular visits, assessments/segments, or score variables in your Data Bundle use the *navigation tree* to reveal the visits, assessments/segments, or score variables for each experiment and then click the checkbox to the left of those items you wish to include. Click on the plus sign to reveal these details (see Figure 3.12b) and on the minus sign to hide them. Clicking on a checkbox that is a *parent node* in the *navigation tree* will select all the items nested within it. (E.g. If you click an experiment checkbox, all of the visits, assessments, segments, and score variables will be included in your bundle.)

After selecting the Subject image data items to include in your Data Bundle, the "Download Size" alert will confirm how large the download will be (in bytes). The "Download Size" alert message is located just below the "Bundle Name" field at the top of the screen.

Download size (in bytes) : 0

Detail: Download Size Alert

Once you are finished selecting Subject image data items to include in your Data Bundle, click on the "Schedule Download" button at the bottom right of the screen. After clicking the "Schedule Download" button, a confirmation message will appear (see Figure 3.13) that contains a Job ID number. To return to the Query Results screen without scheduling a download click the "Back to Search Results" button.

3.6.3.4 Downloading Image Data One-by-one

You also have the option to download specific image data series directly, while browsing Subject data. From the Query Results screen (Figure 3.6), select a specific subject by clicking on the Subject ID number, which is an *active link*. This will take you to the Subject Screen (Figure 3.7), which contains a list of all visits for this subject and experiment. After browsing to the image data for the subject, where applicable, you will see a message for each image data series explaining how to download that particular image series (see Figure 3.14). Click the "Download as AFNI BRIK" button to download that image series. You may also browse for a specific image by clicking the "Browse Image Data" button. From the Browse Image Data screen you can select a single image to download.

3.6.4 Managing Scheduled Download Jobs

Once you have submitted a Batch Query (see Section 3.6.1.1) or Data Bundle (see Section 3.6.1.2), you can view scheduled and completed Batch Jobs and Data Bundles by clicking on the "Manage Jobs" menu item in the *navigation bar*. This will take you to the Job Management screen (see Figure 3.15). This screen lists the downloads you have scheduled and the Job ID number, data type, date of download, data description, download status, size of data (in bytes), and number of downloads for each job. The data type will either be a "Batch Query" or an "Image Download" depending on the kind of job you have scheduled. The data description will be the name you provided where applicable. The status will indicate if the scheduled job is ready for you to download to your local computer. If the status is "finished" you can click the "Download" button at the far right of the screen. If the status is "not_started" or "started" you can wait until it is complete before downloading it. To remove a scheduled job from this list, click the "Remove" button for that job. You can download the same job multiple times; for example you may log on to the HID from different machines and wish to download the data to multiple computers. The number of downloads indicator will keep track of how many times you have downloaded the same set of data.

Clicking on the "Download" button will open up a dialogue window on your local computer asking you how and where you prefer to save the download. A Batch Query will download as a Comma Separated Values file. You may then use this file with your own database or statistical analysis software.

Chapter 4: Best Practices

Throughout this manual there has been an attempt to speak only about the software itself however there are several areas that require a set of best practices in order for the HID software to achieve the greatest benefit.

4.1 Getting data HID ready

There will be times that you have data that you want to enter into the HID in order to share with other sites but need to establish best practices with your group to prepare the data for entry into the HID. Issues that may be addressed are practices for dealing with discrepancies or ambiguities on written paper forms during data entry or completing double data entry. Another issue may be that you have forms that do not exist in the HID's library of online assessments. Another tool, CALM the Clinical Assessment Layout Manager, can be used to create online assessments that match the written ones that you use to add ease to the data entry process. A best practice for your group might be to use the opportunity to create a new online assessment format that works fro your group.

4.2 Naming Practices

The most important set of best practices regards the naming of data that you enter into the HID. The *HID web app* does not require specific kinds of naming practices for experiments, assessments, score variables, visit types, segment types, protocol names etc. It is crucial to establish a set of common practices in your group so that your colleagues and collaborators can easily understand the data shared through the HID. For example, the visit types used by fBIRN members include Clinical Visit and MRI Scan Visit. In this way the data is categorized by the type of data that is provided in each type of visits; all image data can be located under MRI Scan Visits. This makes it easy for others to find the type of data they are looking for.

Another example is in the way that subject data is organized. For each subject enrolled in an experiment, the subject has one or more visits. Each visit is made up of one or more studies, each study is made up of one or more segments, and each segment is made up of one or more assessments. The provision of this hierarchy does not dictate your practices for organizing and naming your subject data. The word segment is deliberately vague so that you can determine what practices will best suit your organization. For example you can have only a single default study for each subject and add all segments to this study, or you can have many studies with a single segment.

A good method for determining naming practices is to consider your workflow for data collection, entry, and the reasons that people may be accessing the data in the future.

The *HID web app* provides a nice template by which the practices for data collection and entry can remain relatively intact (the same as your existing practices) while making accessing the data easier. Naming practices are the best way to bring together your existing data collection practices with the data accessing practices you wish to gain through the HID.

Chapter 5: Administrative Privileges

5.1 Administrative Privileges

5.1.1 Navigation Overview

The *admin navigation bar* for the HID is a menu of links running vertically on the left-hand side of the webpage. Otherwise identical to the normal-user's *navigation bar*, the *admin navigation bar* includes two additional menu items: Configuration and App Configuration. The admin menu items can be clicked once to load.

The Configuration menu item can be used to add new users, set user privileges, and define database parameters.

The App Configuration can be used to set local cache directory and define user-mediator query options as well as database customizations.

The Question-Mark button can be clicked from any field for the "Help" Option with a particular screen, entry or text field.

5.1.2 Configuration Menu: *Add Database, Add User and Edit Privileges*

Clicking the Configuration Menu item will load the Database and User Configuration screen (Figure 3.16).

The top left displays the current database information that is being used such as the Database ID, type and location. The database pull-down menu located at the top-center of the Database and User Configuration screen also displays the active database. Other sets or pre-loaded databases can be chosen by navigating the pull-down menu via clicking and holding the down-arrow button.

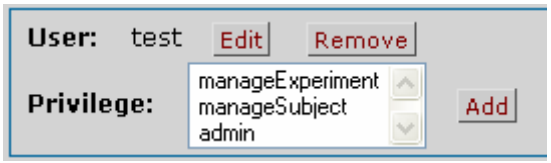
5.1.2.1 Add Database

Additional database sets can be added by clicking the "Add" button Add to the left of the pull-down menu to load the Database Configuration screen (Figure 3.17) where you will be prompted to added the Database ID, URL, type and location in the text field. Click the Add button at the bottom left of the Database Configuration screen when finished to register your database entry.

5.1.2.2 Add User and Edit Privileges

New users can be added in the Database and User Configuration screen by clicking the "Add New User" button Add New User under the *Web Application Users* menu. This will load the User Configuration Screen (Figure 3.18) and prompt you to enter the User's ID and password confirmation. Click the "Add" button at the bottom-left of the User Configuration screen to register the new user and return to the Database and User Configuration screen where you can edit this user's privileges. Once a User has been registered, it is no longer possible to edit the User ID.

The newly-added user does not have added privileges yet. This is evident as no privilege is associated with the user but still needs to be added by an administrator as seen in the box-menu below. Privileges must be chosen and added individually by clicking a privilege and then registering the choice by clicking the "Add" button.



Detail: Adding Privileges

The possible privileges are *manageExperiment*, *manageSubject*, and *admin*: all or any of these privileges can be added to a user.

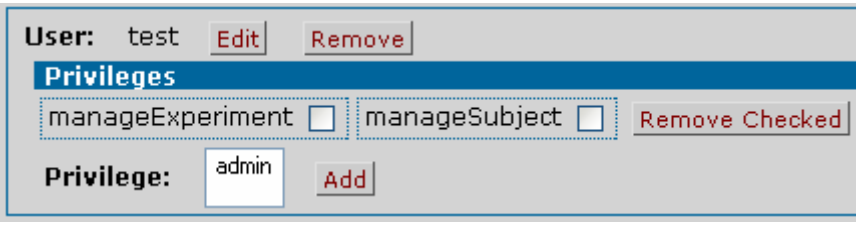
ManageExperiment - Any user with this privilege can add and/or update experiment(s). Enroll subjects to an experiment and/or change their study group.

ManageSubject - Any user with this privilege can add and/or update subject(s), visits and visit segments.

Admin - Any user with this privilege can manage user/database configuration, assign/remove privileges and configure the whole application.

Once privileges are assigned to a user, they will be displayed under the blue "Privileges" bar running horizontally across the screen under each user-name. Note that user "test" has

been assigned “manageExperiment” and “manageSubject” privileges but has not been added as “admin.”



Detail: Assigned Privileges

Privileges can always be added, edited, or removed at any time. Privileges can be removed by checking the box to the right of the assigned privilege followed by clicking the “Remove Checked” button to the right.

A User can be removed by an administrator at any time by clicking the “Remove” button

to the right of the User ID from the Database and User Configuration screen. Clicking the “Edit” button

to the right of the User ID loads the User Configuration screen. As discussed previously, the User ID cannot be edited but the password can be changed at any time. Click the “Edit” button at the bottom left corner of the screen to register the changes when finished.

5.1.3 App Configuration Menu

Clicking the *App Configuration* Menu item will load the *Application Configuration* screen (Figure 3.19) which contains four tabs: *General, Mediation, Web Services,* and *Advanced*.

The *General* tab is automatically loaded in the *Application Configuration* screen. An administrator can set the local cache directory by specifying the root in the text field and clicking the “Edit” button to register changes when finished.

The *Mediation* tab (Figure 3.20) displays a series of options that allows the administrator to protect the query-database schema. Checking the box next to “QueryOnly Operation” prevents users from modifying the database unless their User IDs are listed in the text field of the “Mediator Schema Name” option and deploys the Schema mapping parameter that can also be specified. Remember to click the “Edit” button at the bottom-left corner of the screen to apply changes.

The HID Web Application can be configured to provide other web services. To function properly, the Database ID must be entered into the text field of the *Web Services* tab noting the “Edit” button for registering the database ID entry (Figure 3.21).

Lastly, the *Advanced* tab (Figure 3.22) displays many customization options. Checking the box to the left of “Operate in Public Mode” at the top of the screen converts the HID Web Application from private to public mode. In Private Operation (unchecked box), only users added by an administrator have access to the application. In public mode

(checked box), any user can enter his/her email address to gain access to the database. Public mode operation is only advised if the HID web application is used to serve public data as in the case of FBIRN BDR.

Also in the *Advanced* screen, the database schema version can be checked and specified by entering the version number in the text field provided. An administrator can also setup the Web Application's Notification Service by specifying the Email host, user, password or sender in the provided text fields.

Glossary

active link – an active link is an item in the *HID web app* that you can click on to go to a particular screen; active links are icons or underlined words.

add icon – the add icon appears like a green plus sign:

data maintenance privileges – privileges are a set of permissions that are granted by a *HID web administrator* at your local site; at your local site you may wish to allow some users to query data but restrict their ability to alter existing data; all users who will perform data entry will require these special privileges; note that some data entered at your site is protected such that only users at your local site can view that data.

dropdown list - a dropdown list will provide a list of items or values; for filling in parameters for experiments and subjects, select the appropriate value from the dropdown list; in other cases the dropdown list will be a set of items from which you can select the particular item you wish to view.

edit icon – the edit icon appears only when you have recently accessed an experiment or a subject and appears like a pen and paper:

experiment name– an experiment name is chosen by you; while the *HID web app* does not provide any constraints on naming experiments please determine naming practices at your local site.

footer menu – the footer menu is available on all screens of the *HID web app* and provides links to the HID *homepage*, information about the BIRN, BIRN resources, publications, contact information, and links to the NIH, NCRR and USDHHS websites.

header menu – the header menu is available on all screens of the *HID web app* and provides links to BIRN information, resources, publications, contact information, a site map, and additional help with the *HID web app*.

help icon – the help icon appears throughout the *HID web app* next to particular parameters, values, or menu items and provides additional help specific to that item and appears like a questions mark:

HID web administrator – each local site that uses the HID maintains its own *HID web app* and distinct *url* for access to the HID, because of this you must contact your local HID web administrator to gain access to the *HID web app* rather than contacting the BIRN.

HID web app – the HID web app refers to the web application that allows you access to the HID which is a *virtual database*; when you access the HID you are actually using the web application to access distributed data sources; the web application is the interface for access to the HID.

homepage – the homepage is the welcome screen found upon first login and can be returned to at any time by clicking on the "Home" link in the *navigation bar* at the left hand side of any screen in the *HID web app.*

icon legend (See 1.4 HID icon legend)

lookup icon – the lookup icon appears like a magnifying glass:

mediated – a mediation is the method by which the HID brings together data from different sources in different sites affiliated with BIRN; data located at remote sites are mediated through the HID such that you experience an interface with a single *virtual database*; mediation also means that you have access to browse and analyze the data within the *HID web app* interface, without having to download the data to your local machine. However, it is also important to note that mediated data, while appearing to be available to you locally, is still located at a remote site; this is important when downloading data since it must first be downloaded to your local HID before it can be downloaded to your personal computer.

metadata – metadata is data that describes other data; metadata includes descriptions such as the instrument used to obtain data. In the *HID web app* metadata can include actual dataset values that have resulted from a query. The metadata is viewable through the *HID web app* but you must download the data to your local computer to gain access to the actual dataset.

navigation bar – the navigation bar is the menu of links and icons on the left-hand side of the screen in the *HID web app*.

navigation tree – a navigation tree is a visualization of information that is organized hierarchically and is also a menu that allows you to navigate by clicking on nodes that reveal more information in a nested format.

parent node – a parent node is an item in a *navigation tree* that is hierarchically above other nodes that are considered its "children" in the hierarchy; clicking on a parent node will reveal its child nodes.

password – a password is your unique password that you choose or that is provided to you by your local web administrator for login to the HID

protected data - all data marked protected is data that can be viewed by you but not by those at other BIRN sites. For example, a subject is always given a unique ID number generated by the *HID web app* when you enter a new subject; this number is used to identify the subject to users of the HID at other sites, if the data is shared. However, the subject name and local ID number that you can provide is protected and will never be viewed by anyone outside of your local HID users.

pull down menu – a pull down menu is a menu or list that, by default, shows the first item in the menu or list; to choose a different item in the pull down menu, click the downward facing arrow/triangle at the right of the menu field. In the *HID web app* many pull down menus are used to change the information displayed on the current screen; for example, on the Subject Management Screen (Figure 2.8c), the pull down menu is used to select a visit, which will then be displayed on that screen.

scroll menu – a scroll menu will have a scroll bar at the right edge and will provide a list of items from which you can select one item by *double-click*ing on that item

shopping cart icon – there are two shopping cart icons: adds the item preceding it to your shopping cart; takes you to the screen to view the items currently in your shopping cart.

subject ID – a subject ID is a unique identifier for each subject in the *virtual database*; that means that even if you have a local ID for each of your subjects, you must select a subject ID that will be used at all BIRN sites that have access to your data; even if you are not sharing data at this time the selection of a subject ID is mandatory as it provides the platform on which the BIRN mediates and maintains the HID; the *HID web app* provides a button that will select a BIRN subject ID for you.

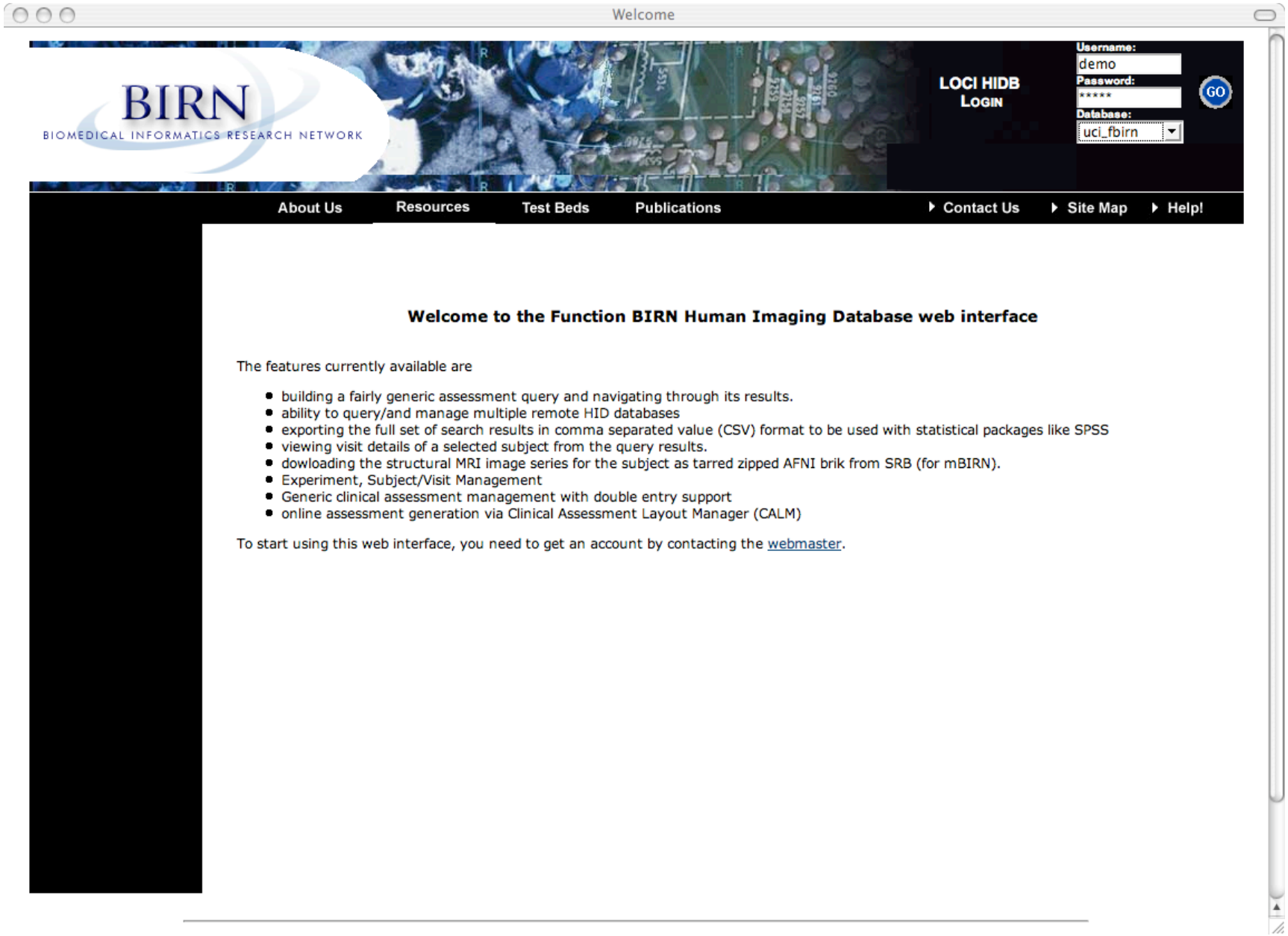
subject name – a subject name is chosen by you; while the *HID web app* does not provide any constraints on naming subjects please determine naming practices at your local site.

url – a url is a Uniform Resource Locator and is just another name for a webpage address; each site that uses the *HID web app* will have its own url for access the HID depending on where it hosts its local data; even though some data accessed through the *HID web app* is from a remote site, all data is duplicated through the hosting of a local site.

username – a username is a unique name that you choose or that is provided to you by your local web administrator for login to the HID

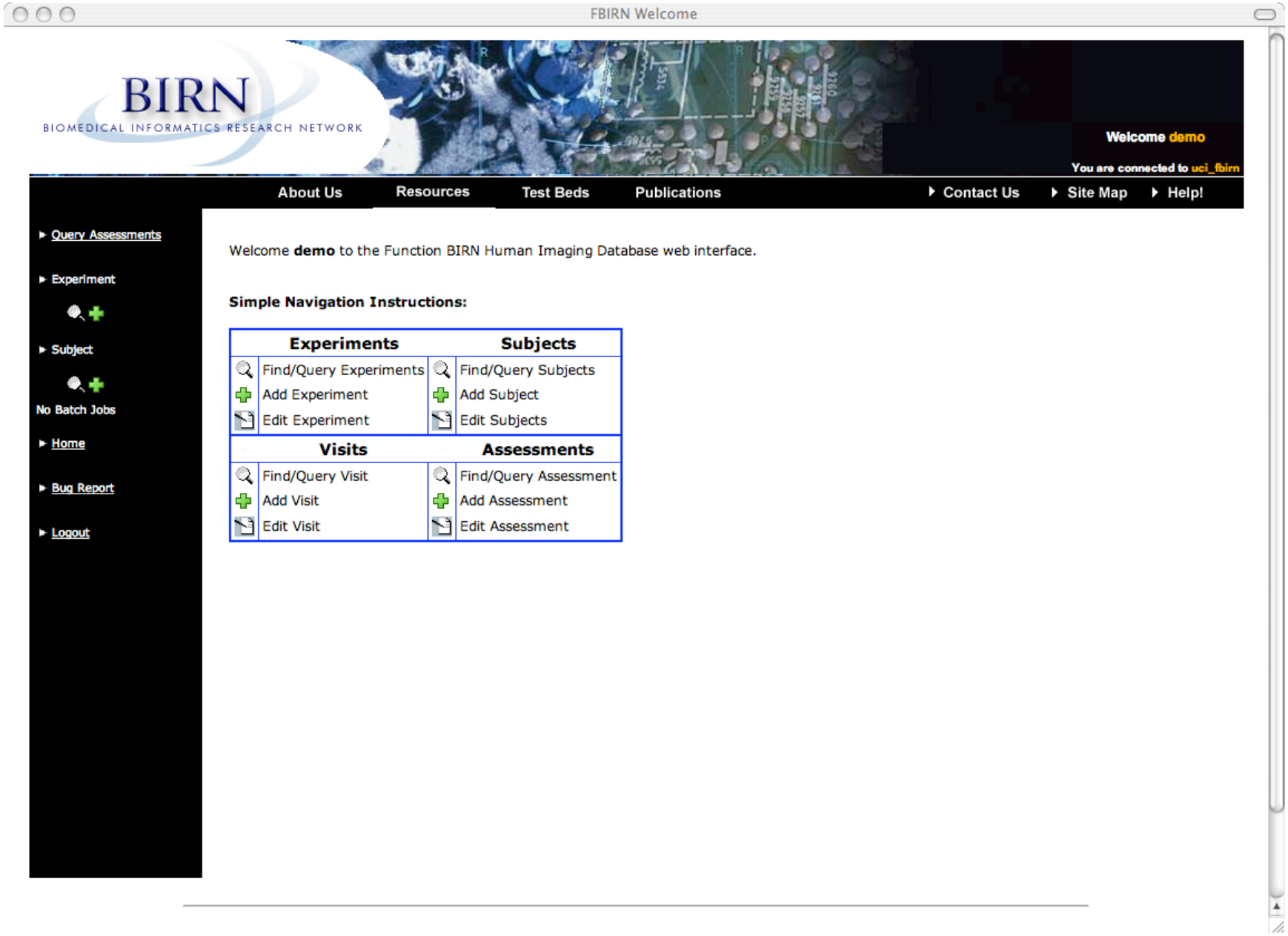
virtual database – a virtual database is a database that exists through a web application as a single database but is actually comprised of several data sources at distributed locations.

Figure 1.1: HID Login Screen



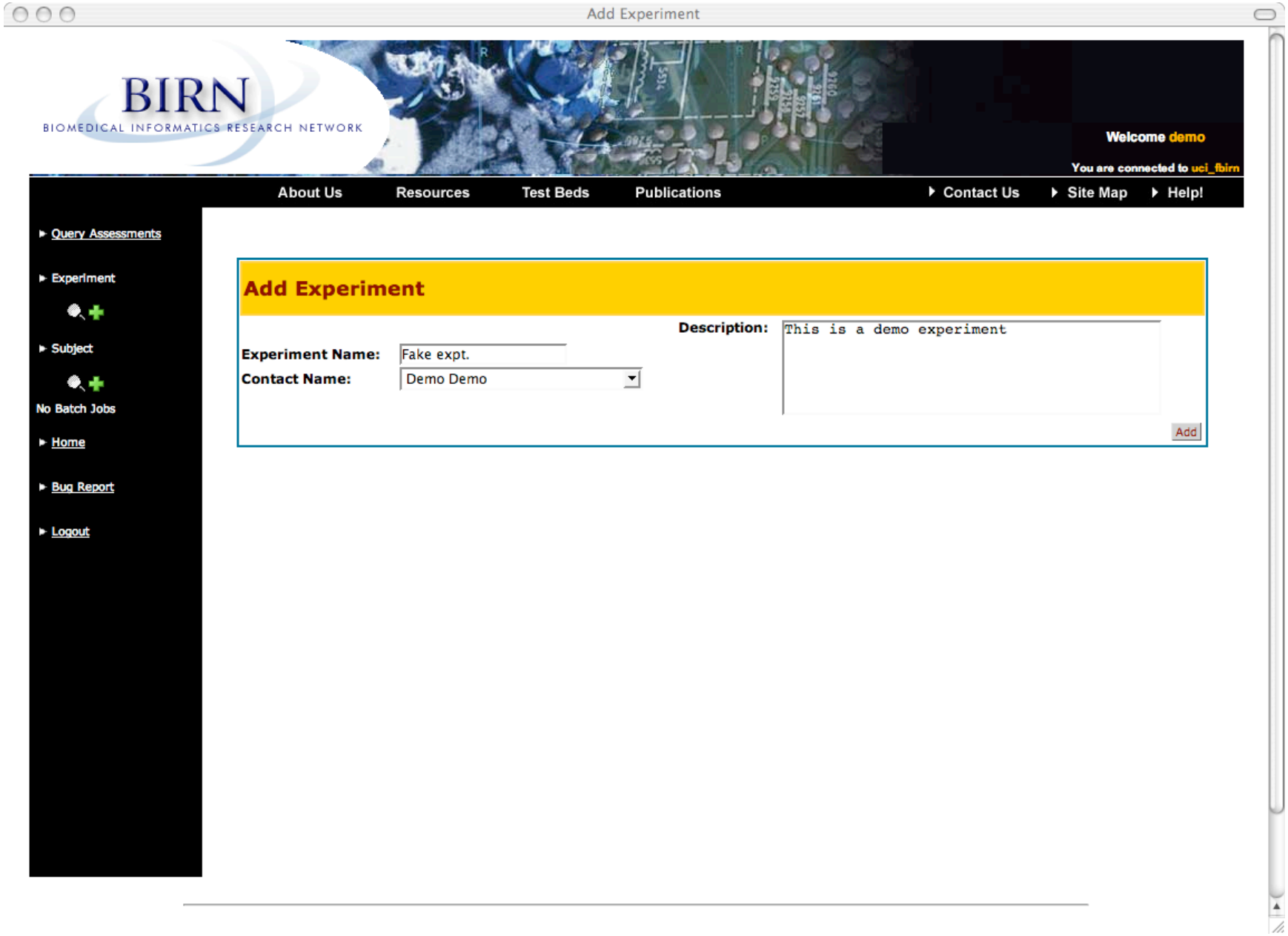
Mentioned on pages: 2, 17

Figure 1.2: HID Homepage



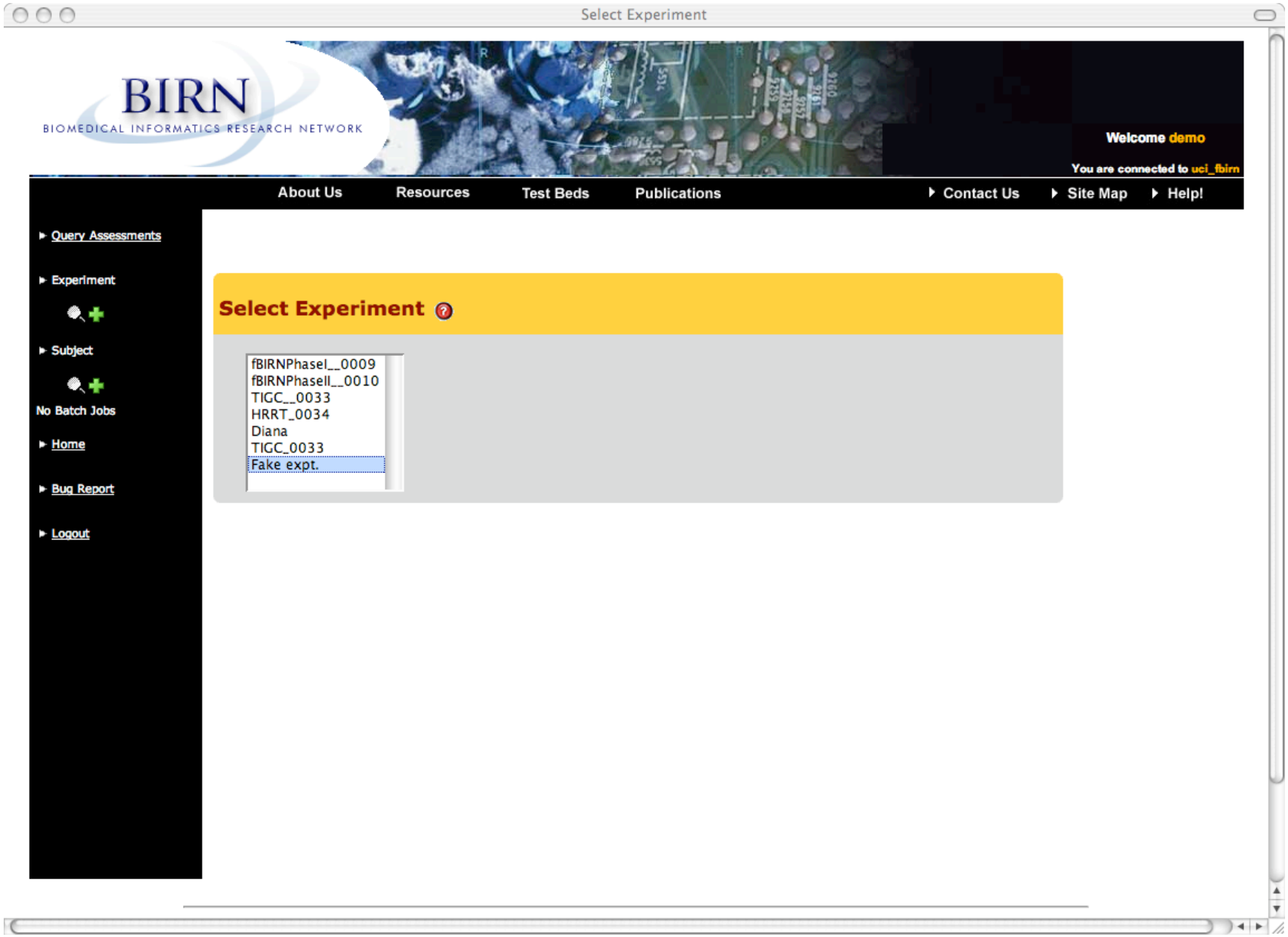
Mentioned on page: 3

Figure 2.1: Add Experiment Screen



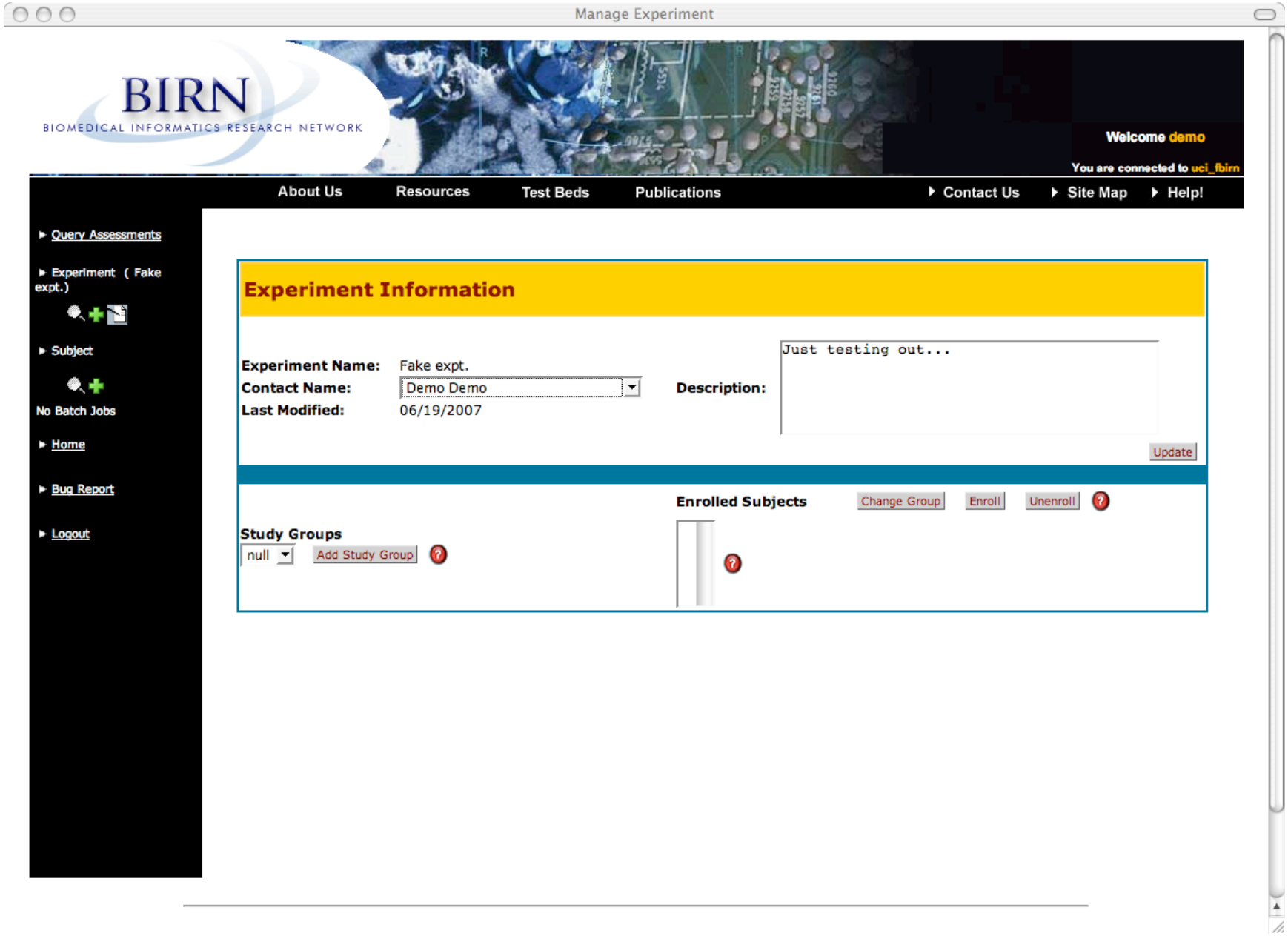
Mentioned on pages: 5, 7

Figure 2.2 – Select Experiment Screen



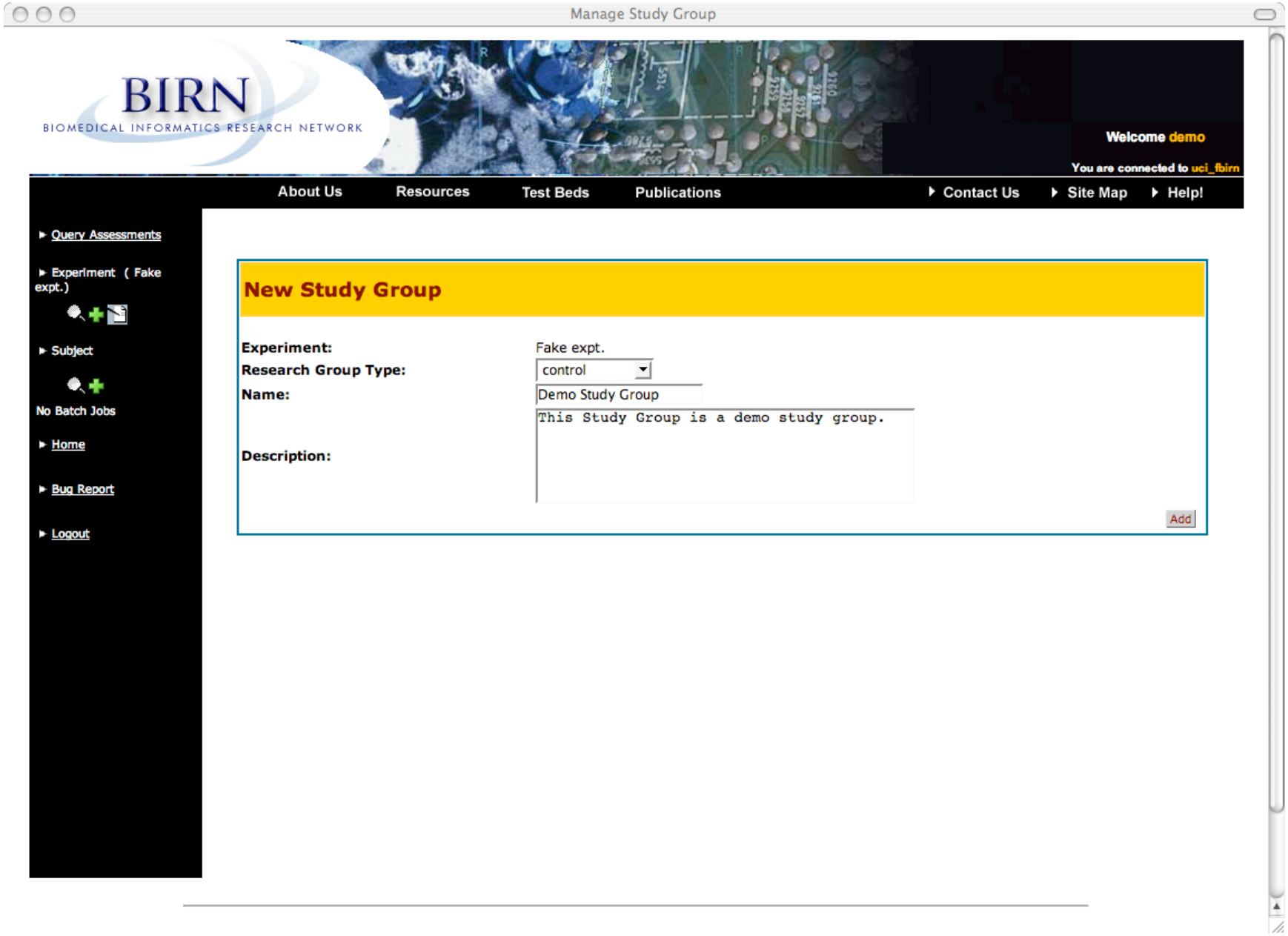
Mentioned on pages: 5, 7

Figure 2.3: Manage Experiment Screen



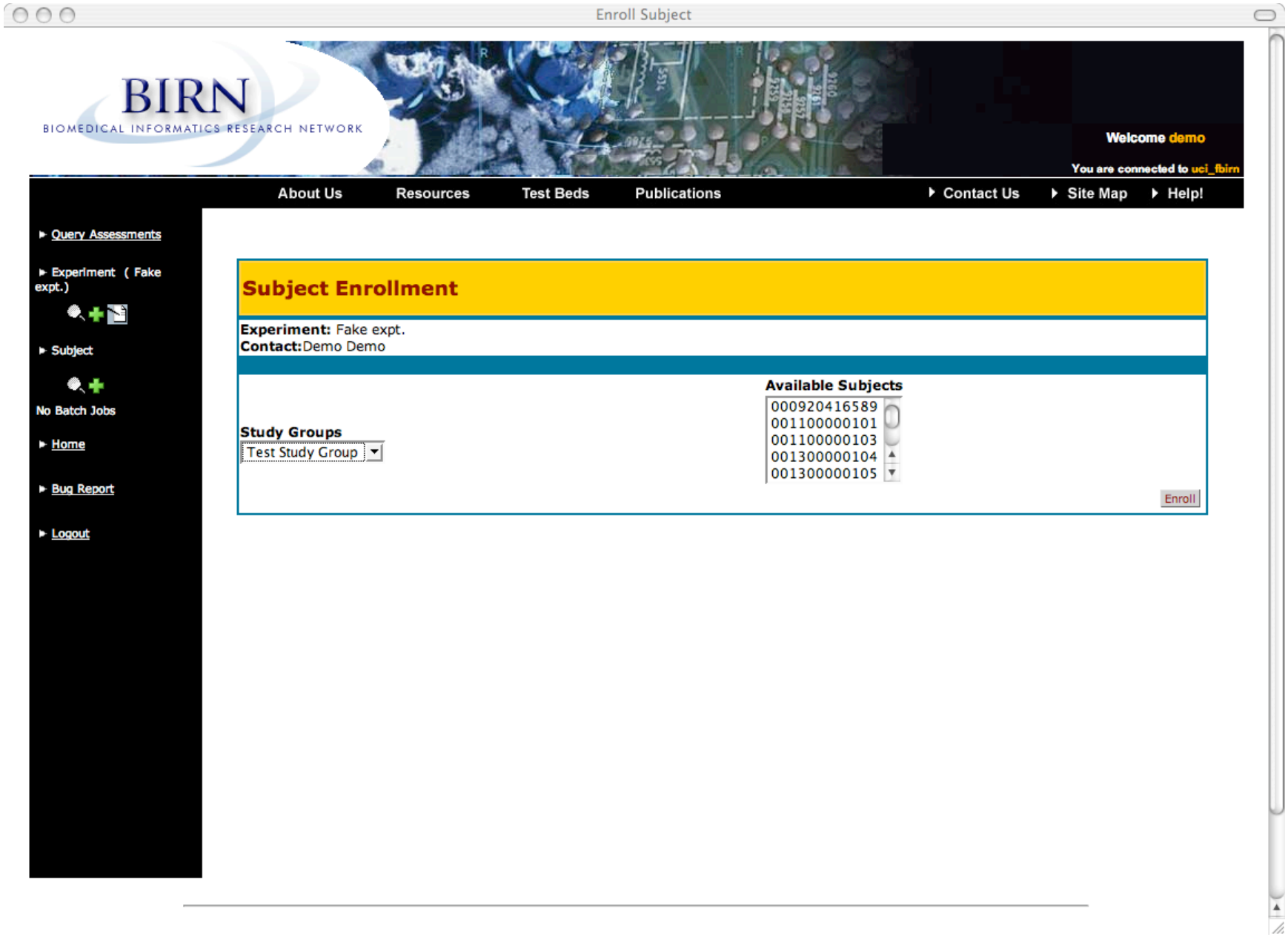
Mentioned on pages: 7, 8

Figure 2.4: Mange Study Group Screen



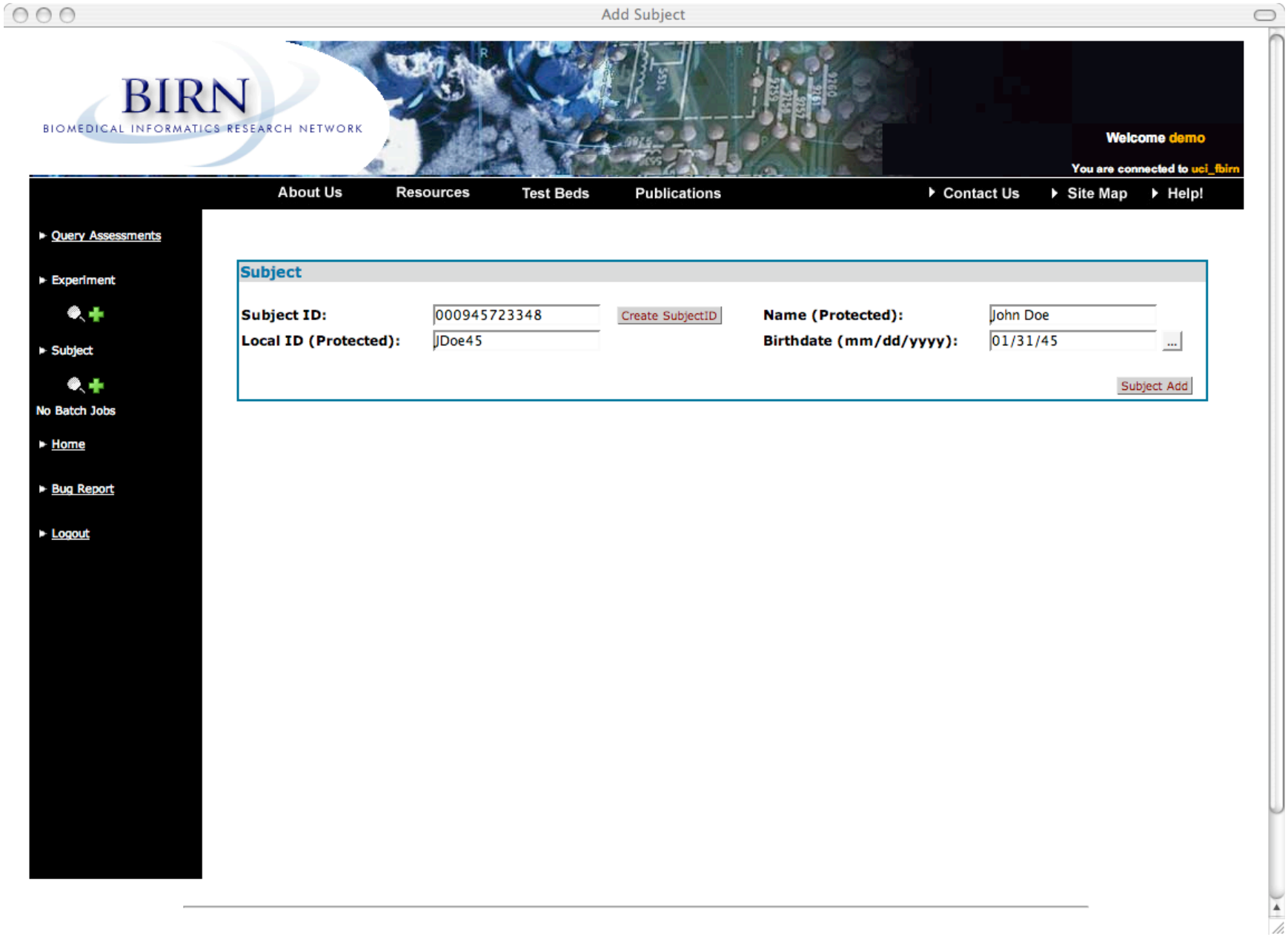
Mentioned on page: 7

Figure 2.5: Enroll Subject Screen



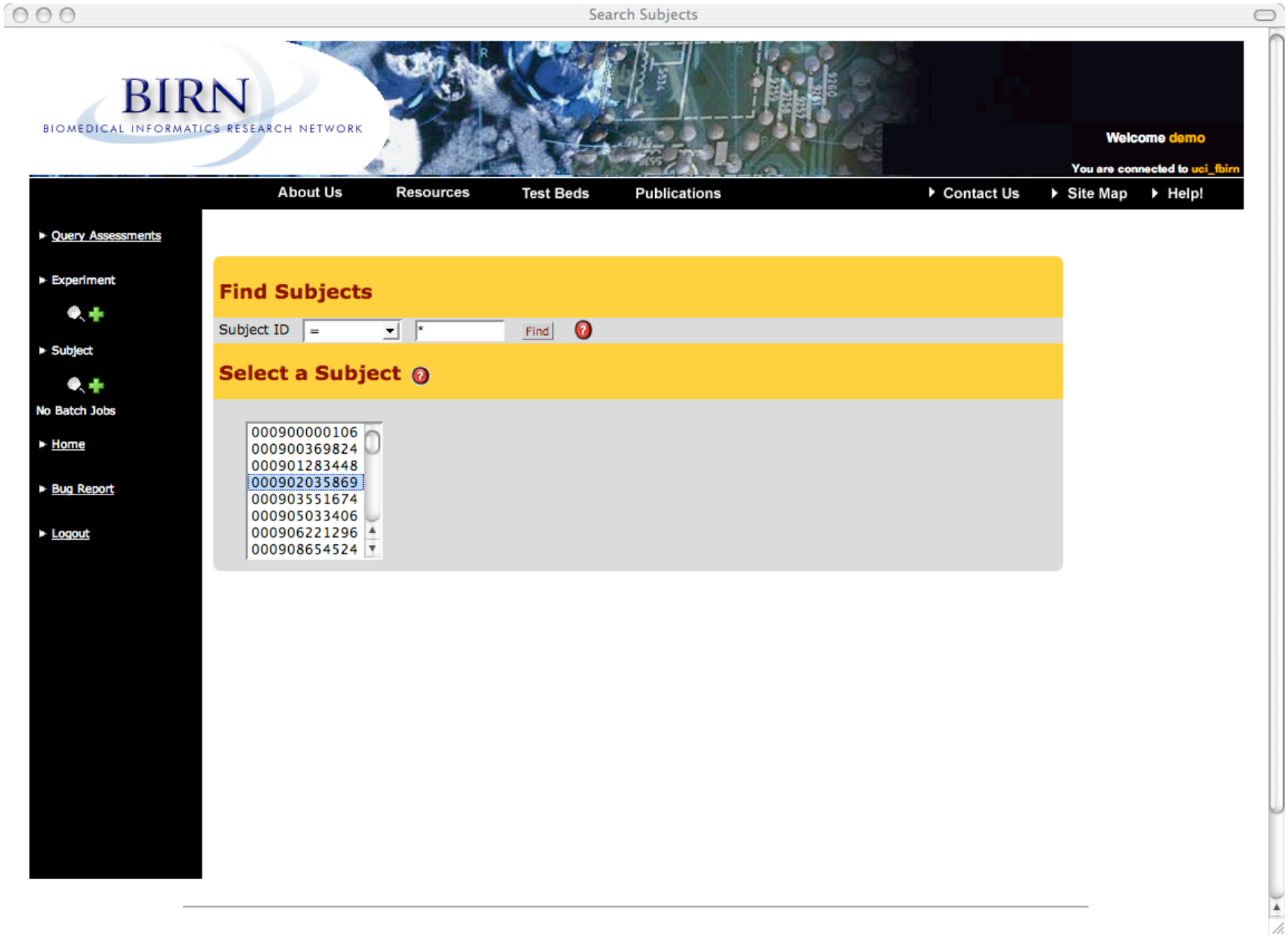
Mentioned on page: 8

Figure 2.6: Add Subject Screen



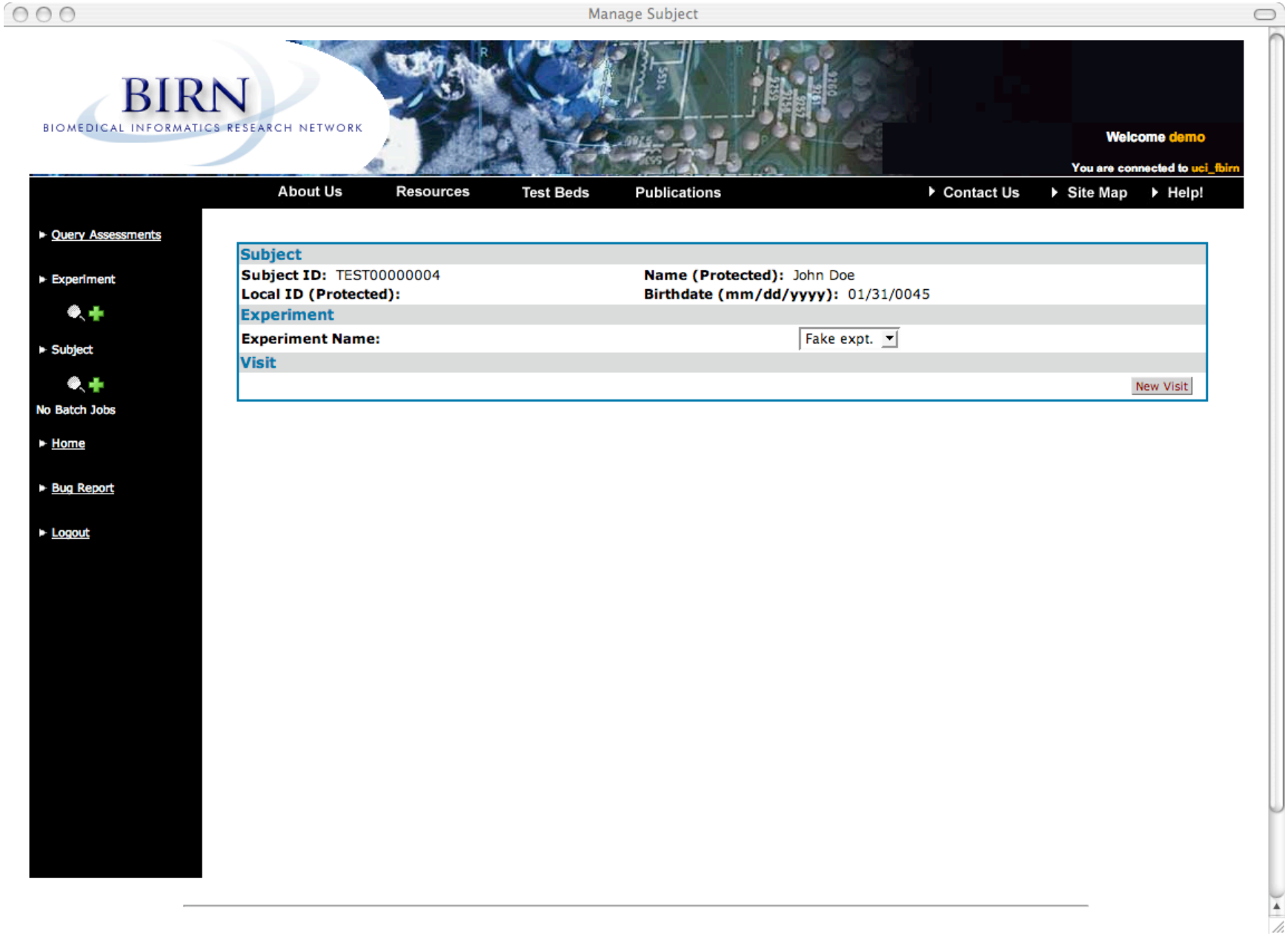
Mentioned on pages: 5, 8

Figure 2.7: Subject Lookup Screen



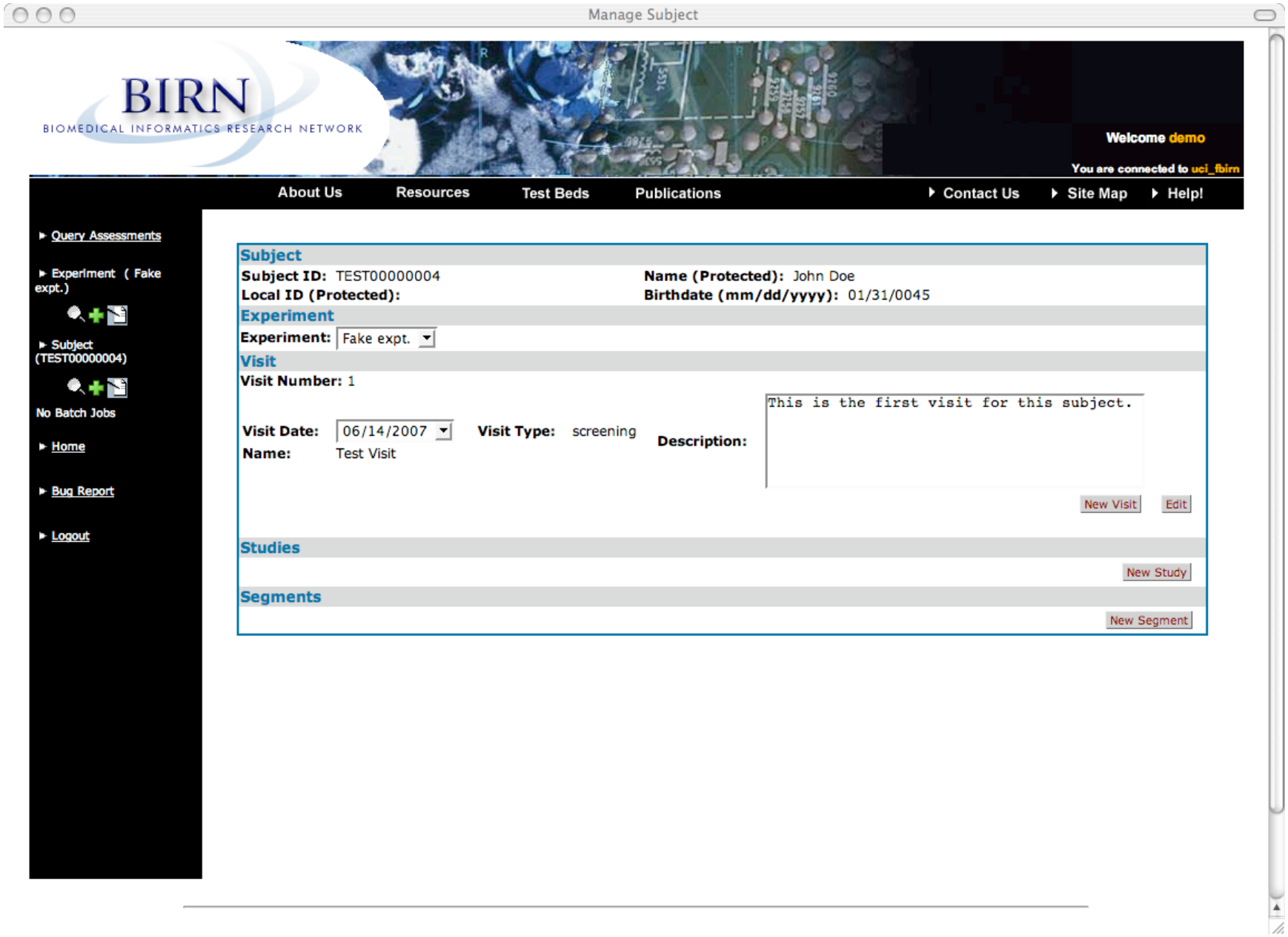
Mentioned on pages: 5, 8

Figure 2.8: Manage Subject Screen – New Visit



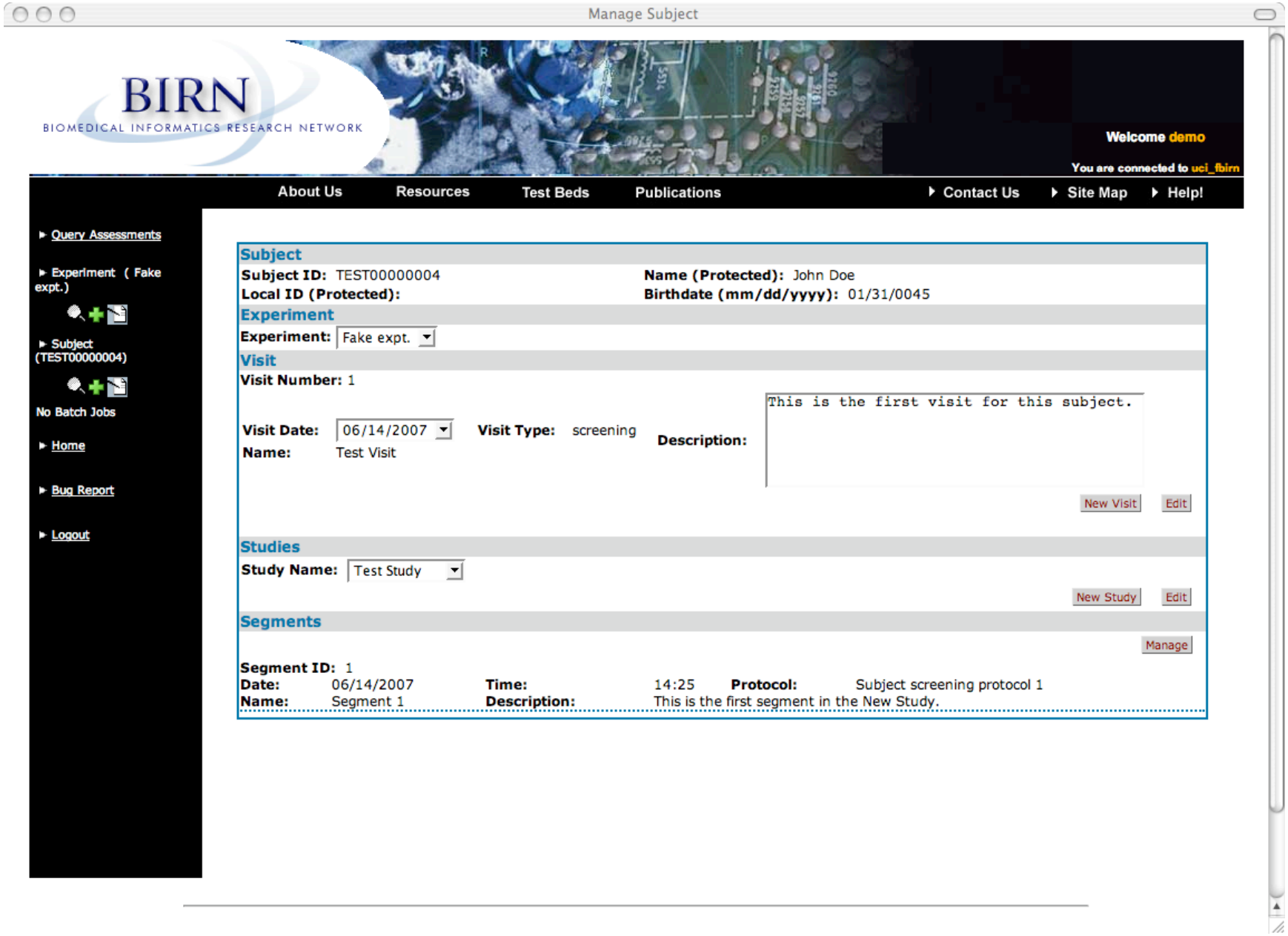
Mentioned on page: 9

Figure 2.8b: Manage Subject Screen – Visit Added



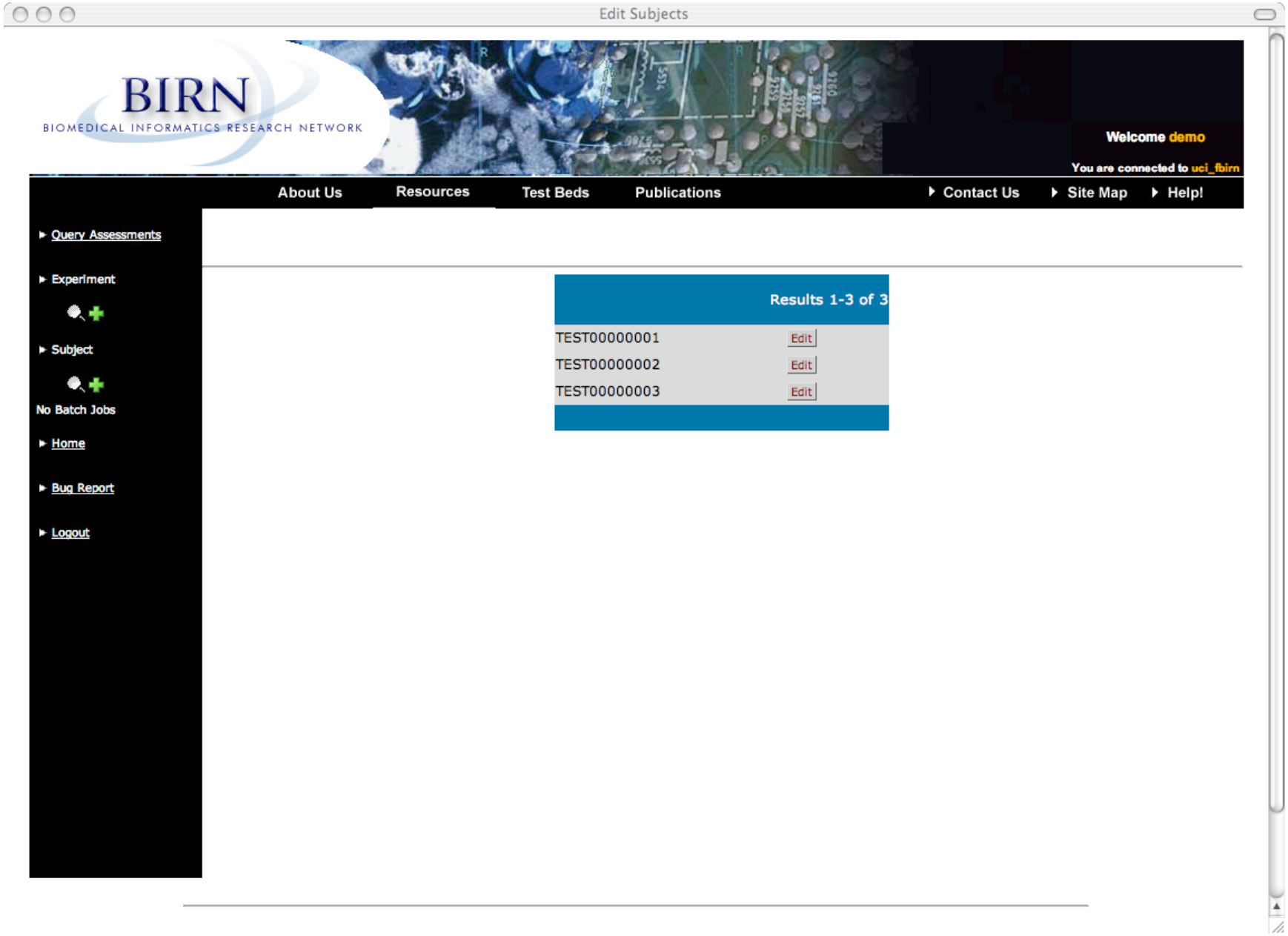
Mentioned on pages: 9, 12

Figure 2.8c: Manage Subject Screen – Study and Segment Added



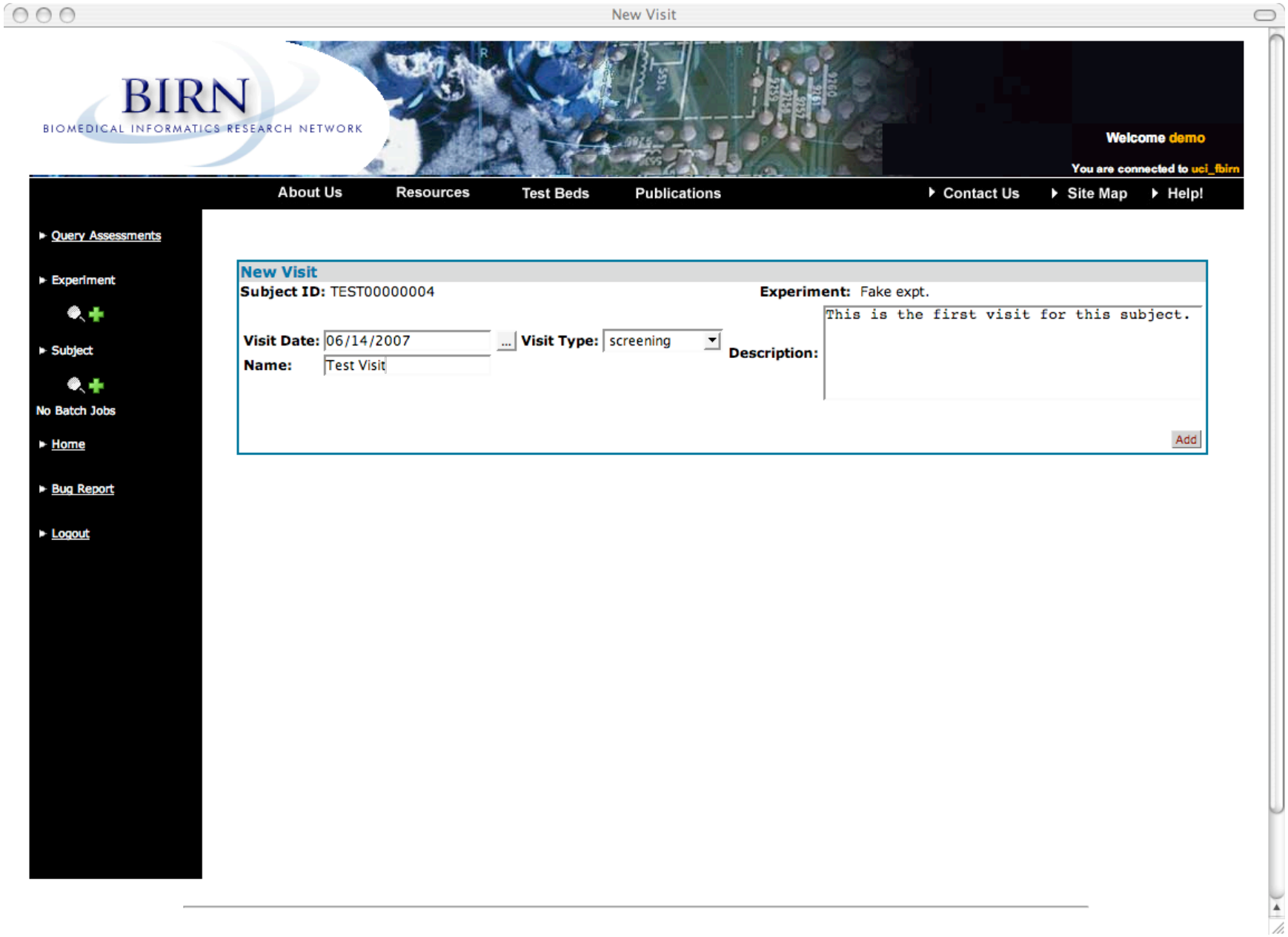
Mentioned on pages: 10-12, 26

Figure 2.9: Subject Lookup – Search Results Screen



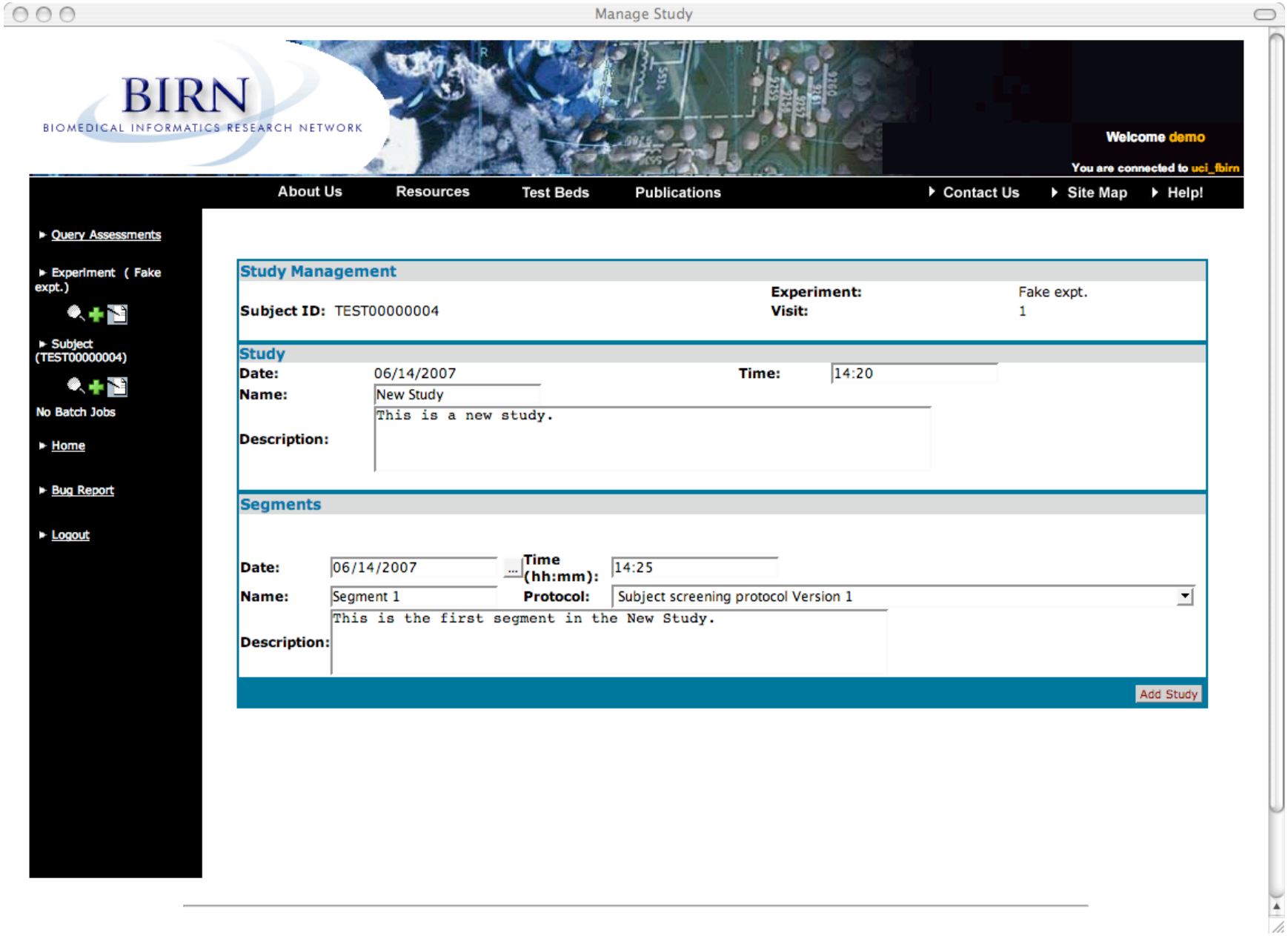
Mentioned on page: 9

Figure 2.10: New Visit Screen



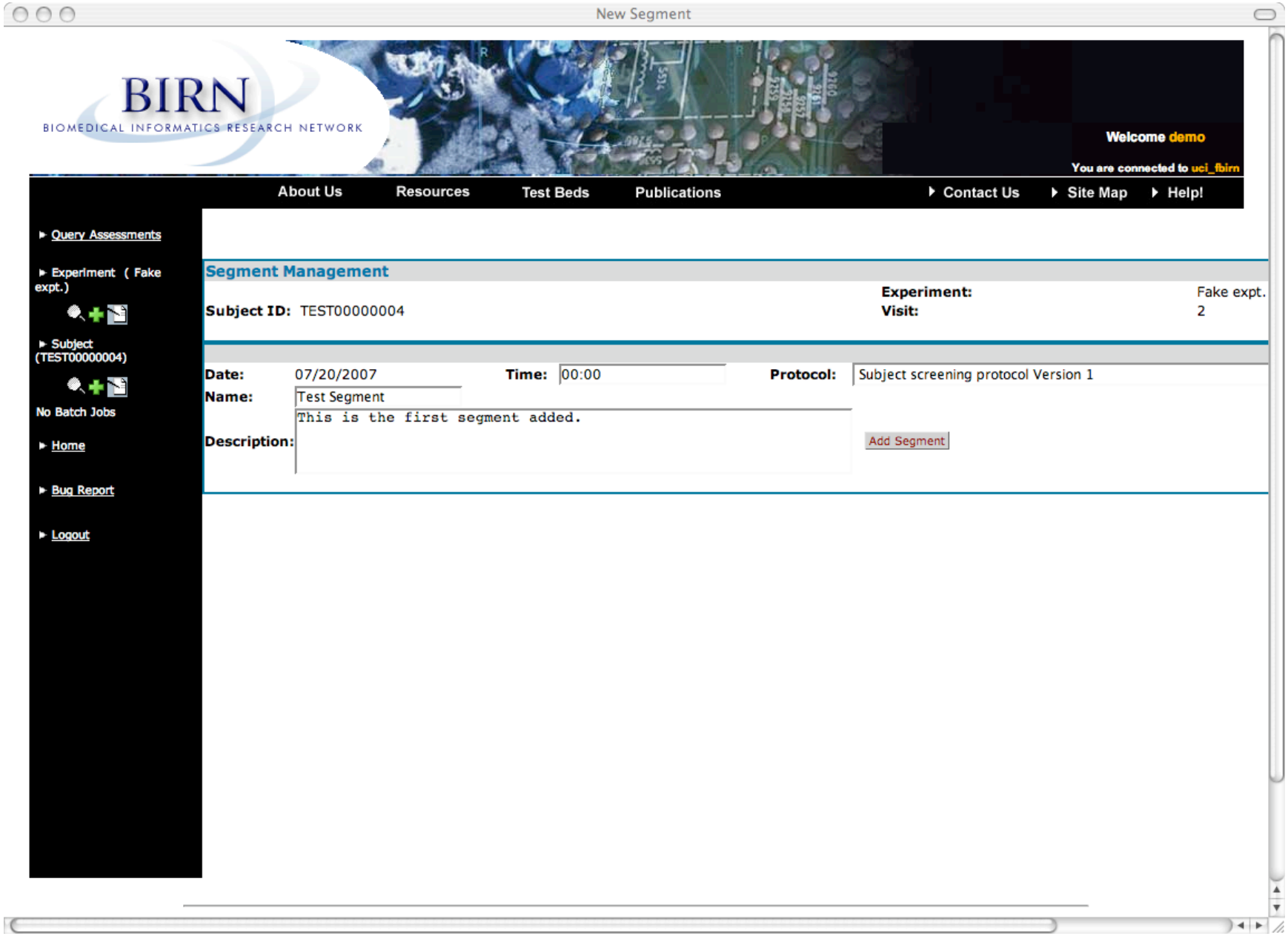
Mentioned on page: 9

Figure 2.11: Manage Study Screen



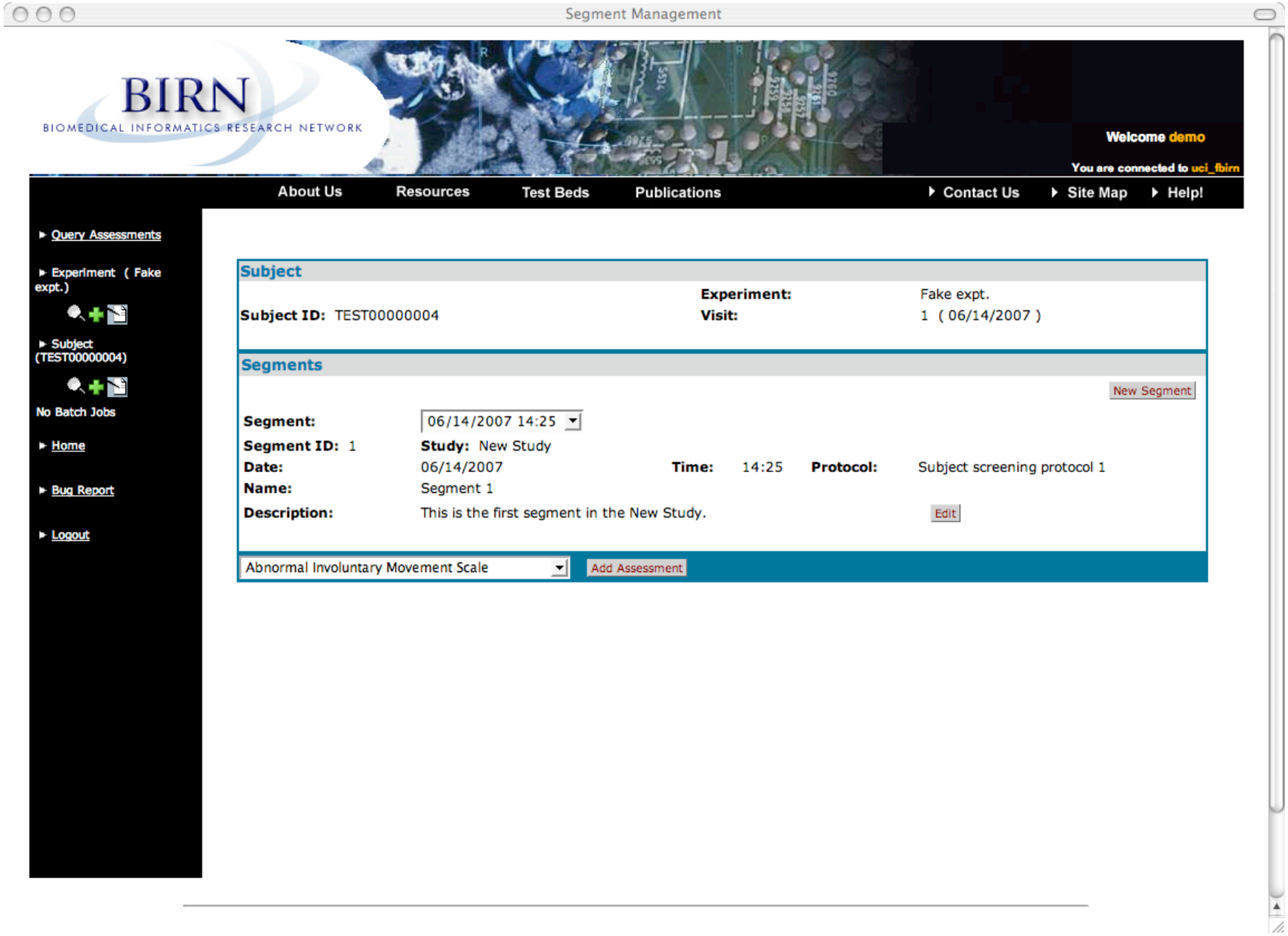
Mentioned on page: 9

Figure 2.12: New Segment Screen



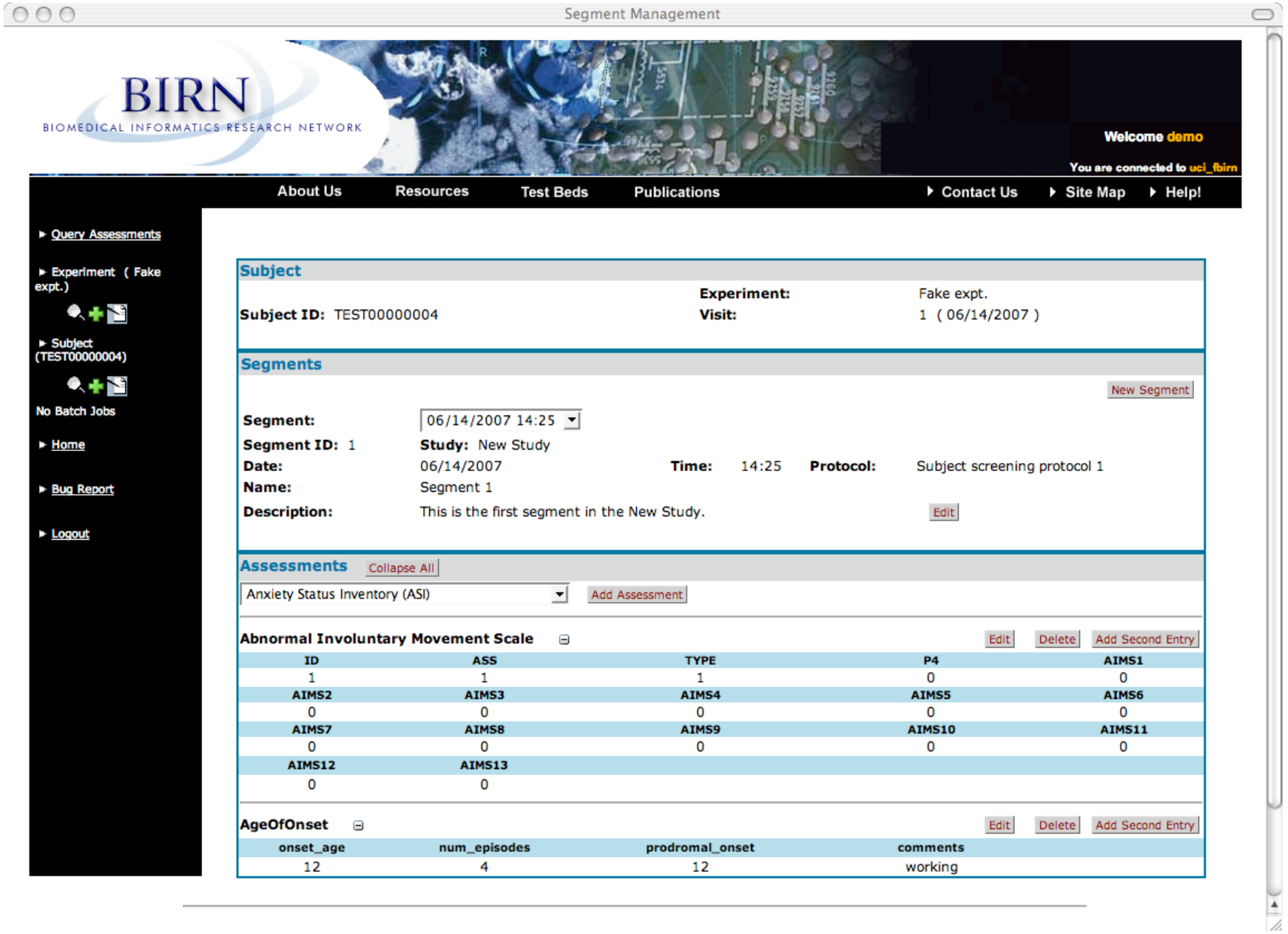
Mentioned on pages: 9, 10

Figure 2.12b: Segment Management Screen – New Segment



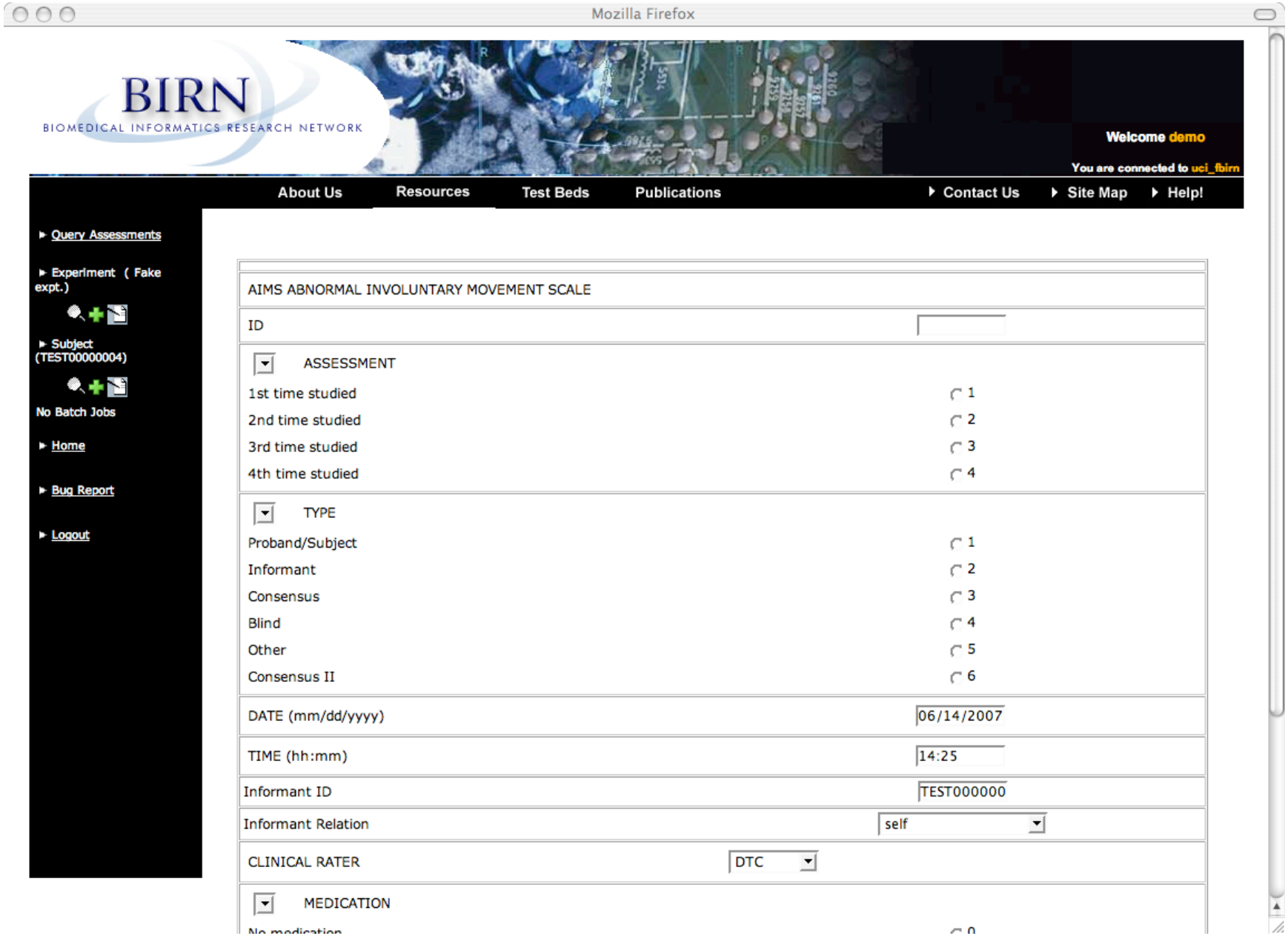
Mentioned on page: 10

Figure 2.12c: Segment Management Screen – Assessments Added



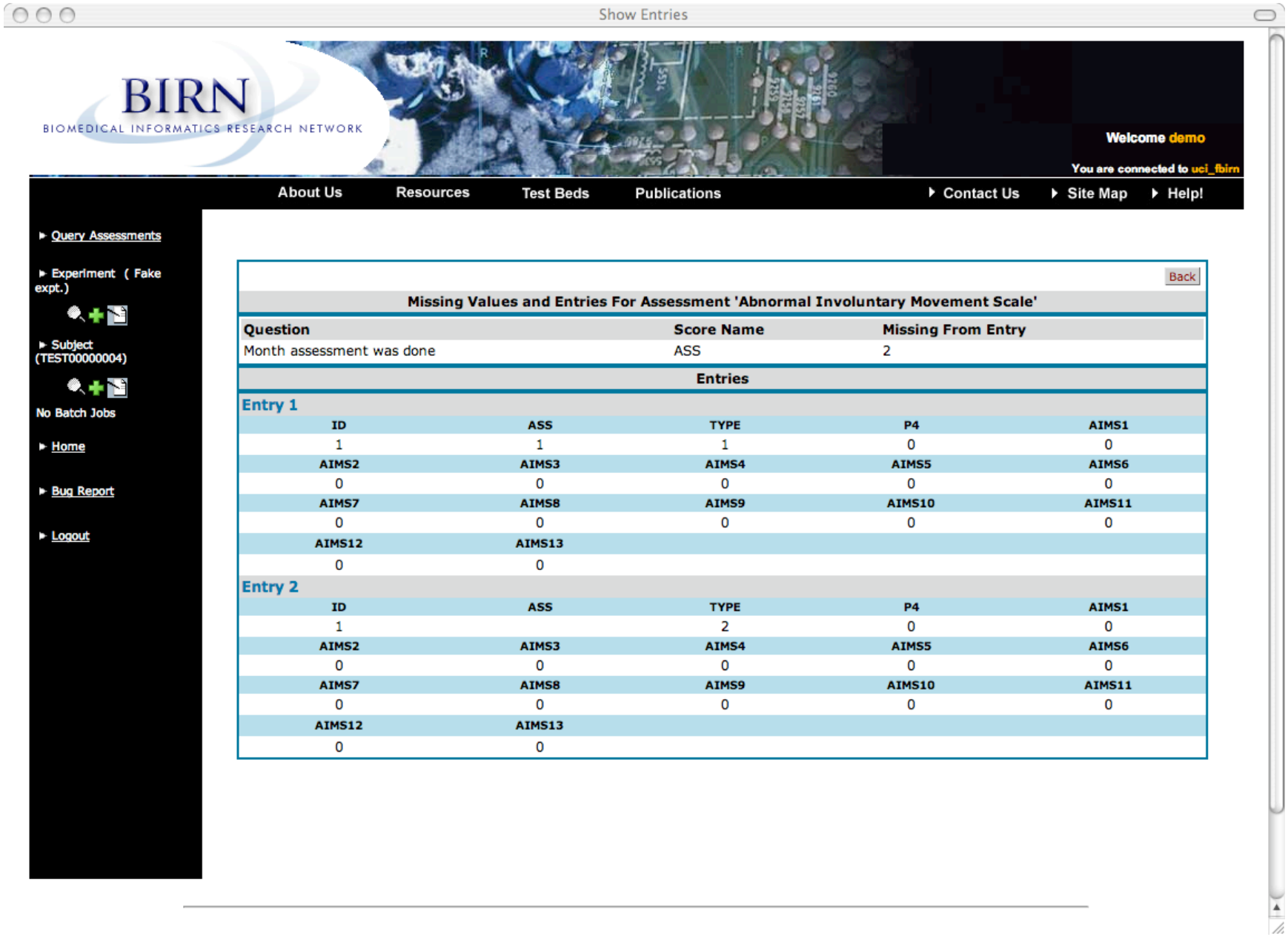
Mentioned on pages: 10-12

Figure 2.13: Assessment Page



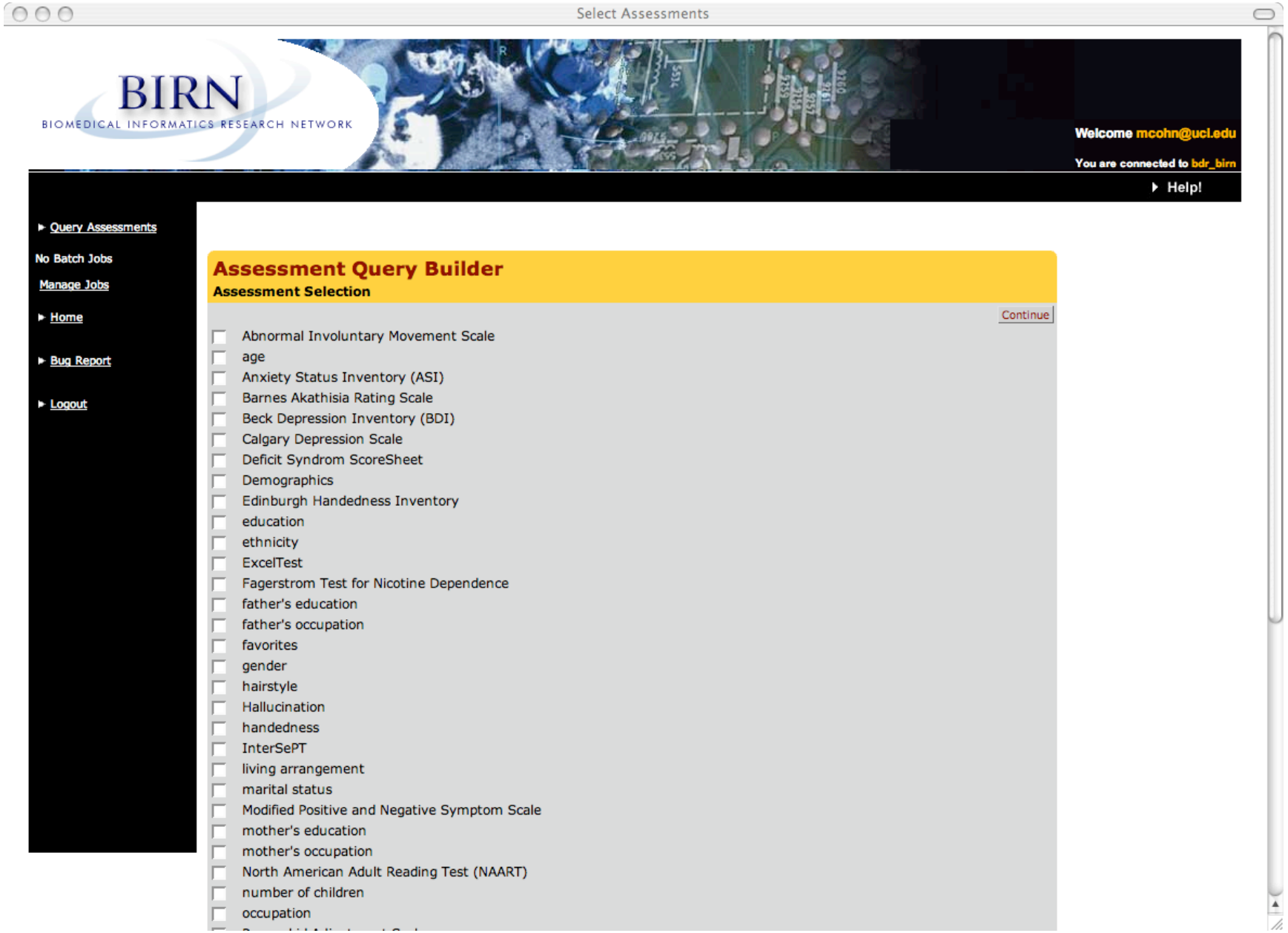
Mentioned on page: 16

Figure 2.14: Double Data Entry – Show Entries Screen



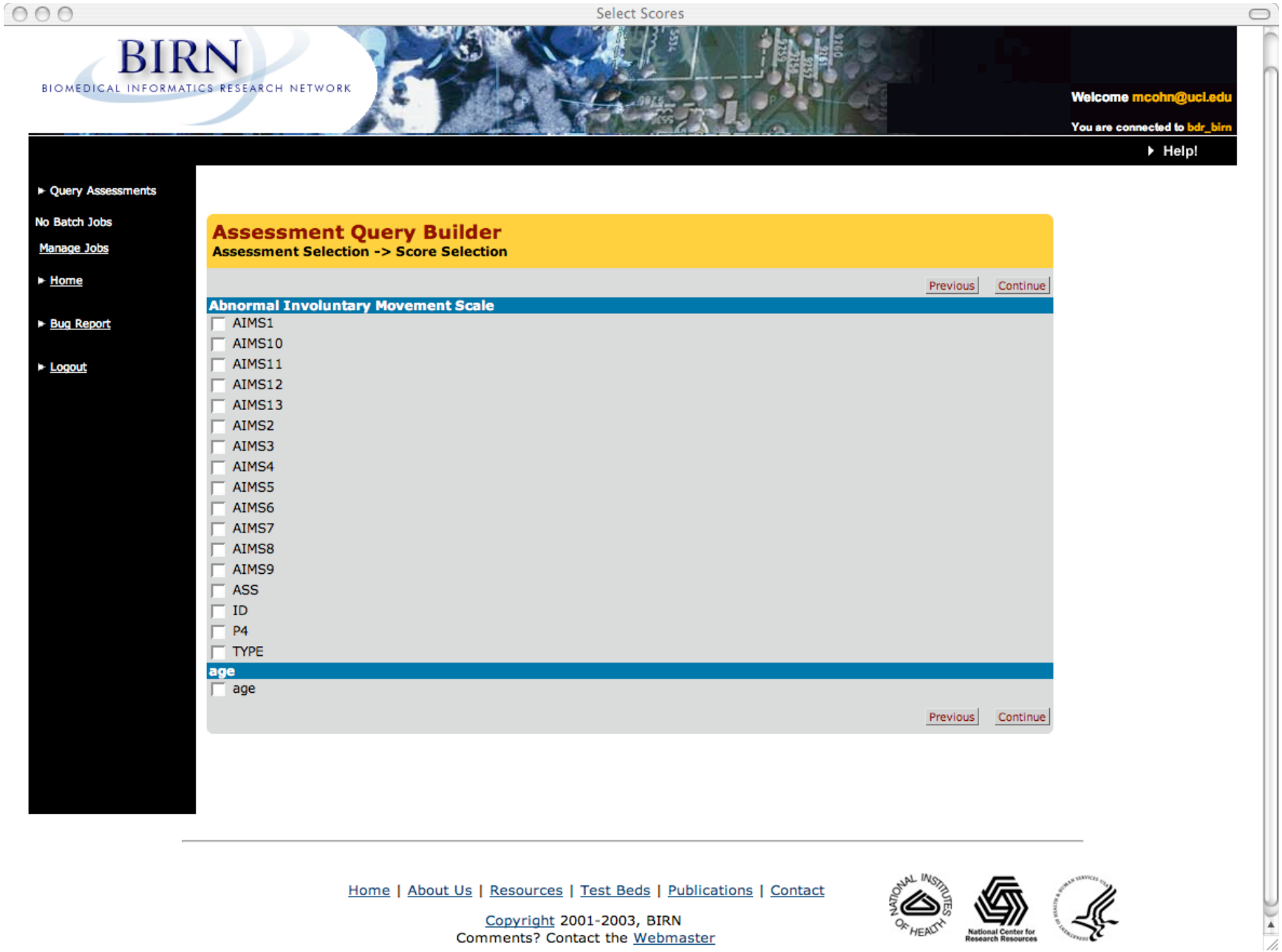
Mentioned on page: 12

Figure 3.1: Assessment Query Builder – Select Assessments



Mentioned on pages: 4, 14-16

Figure 3.2: Assessment Query Builder – Select Scores

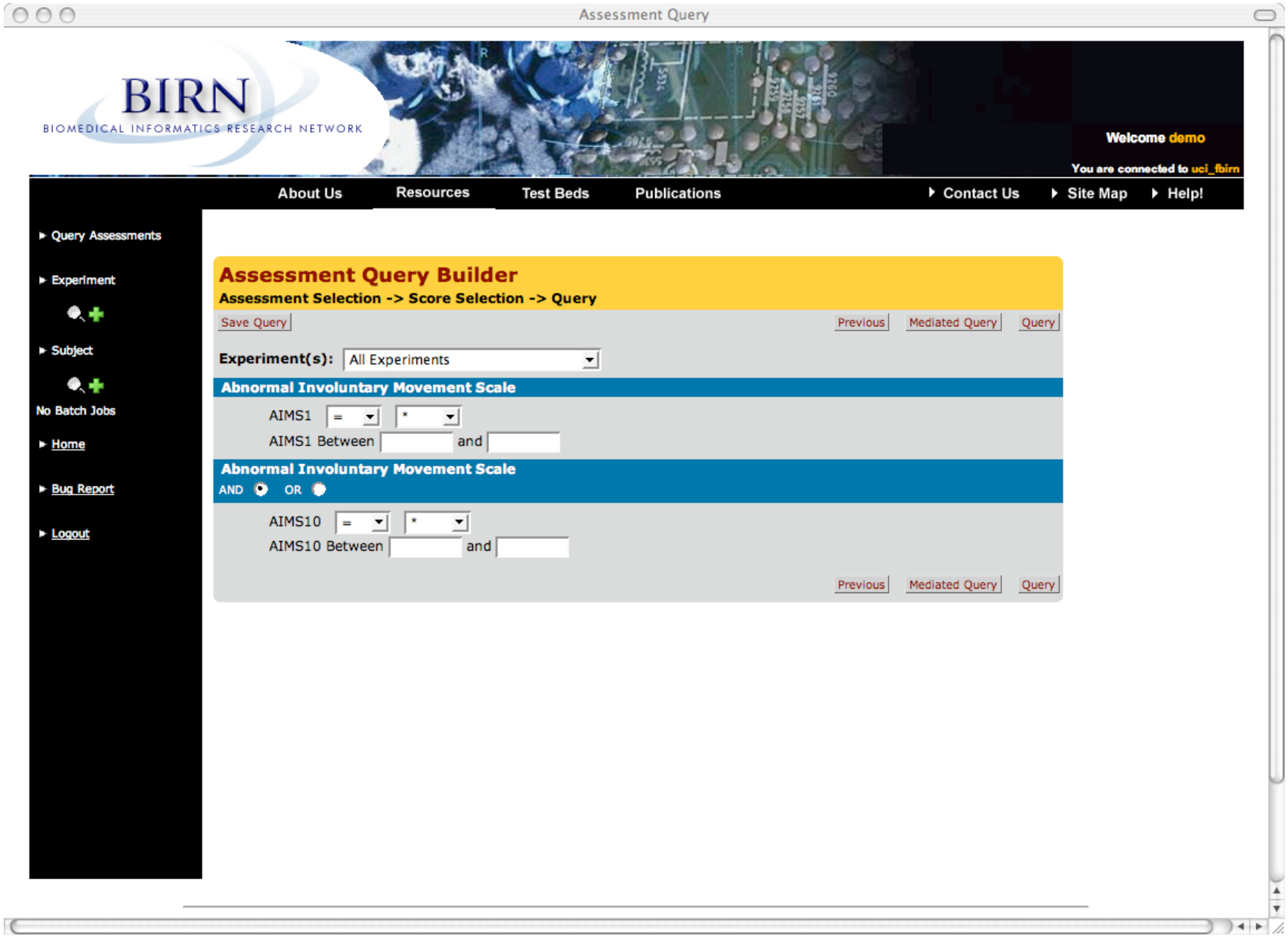


Mentioned on pages: 14-16

Figure 3.3: Assessment Query Builder – Query

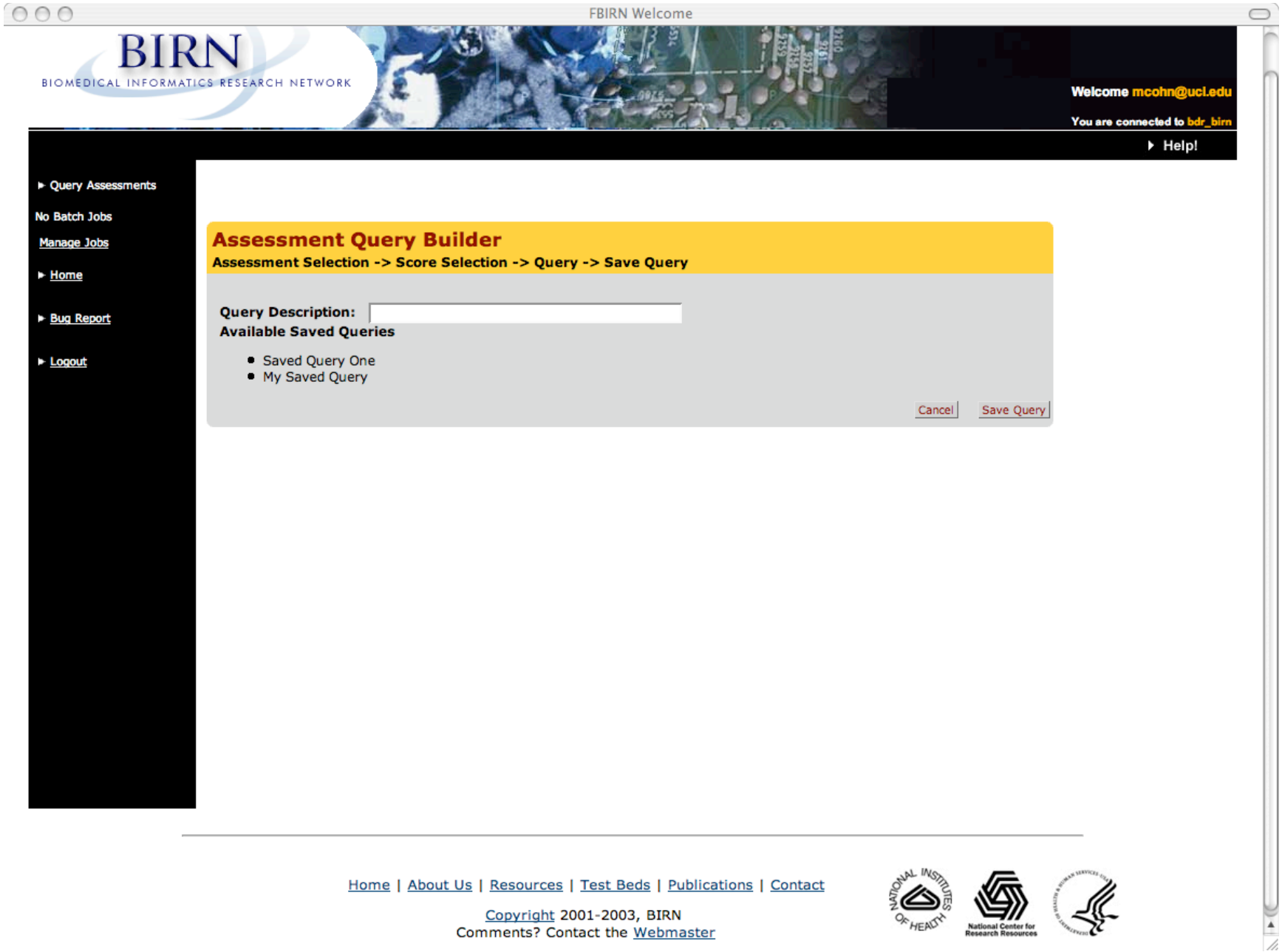
Mentioned on pages: 15-17

Figure 3.3b: Assessment Query Builder – Mediated Query



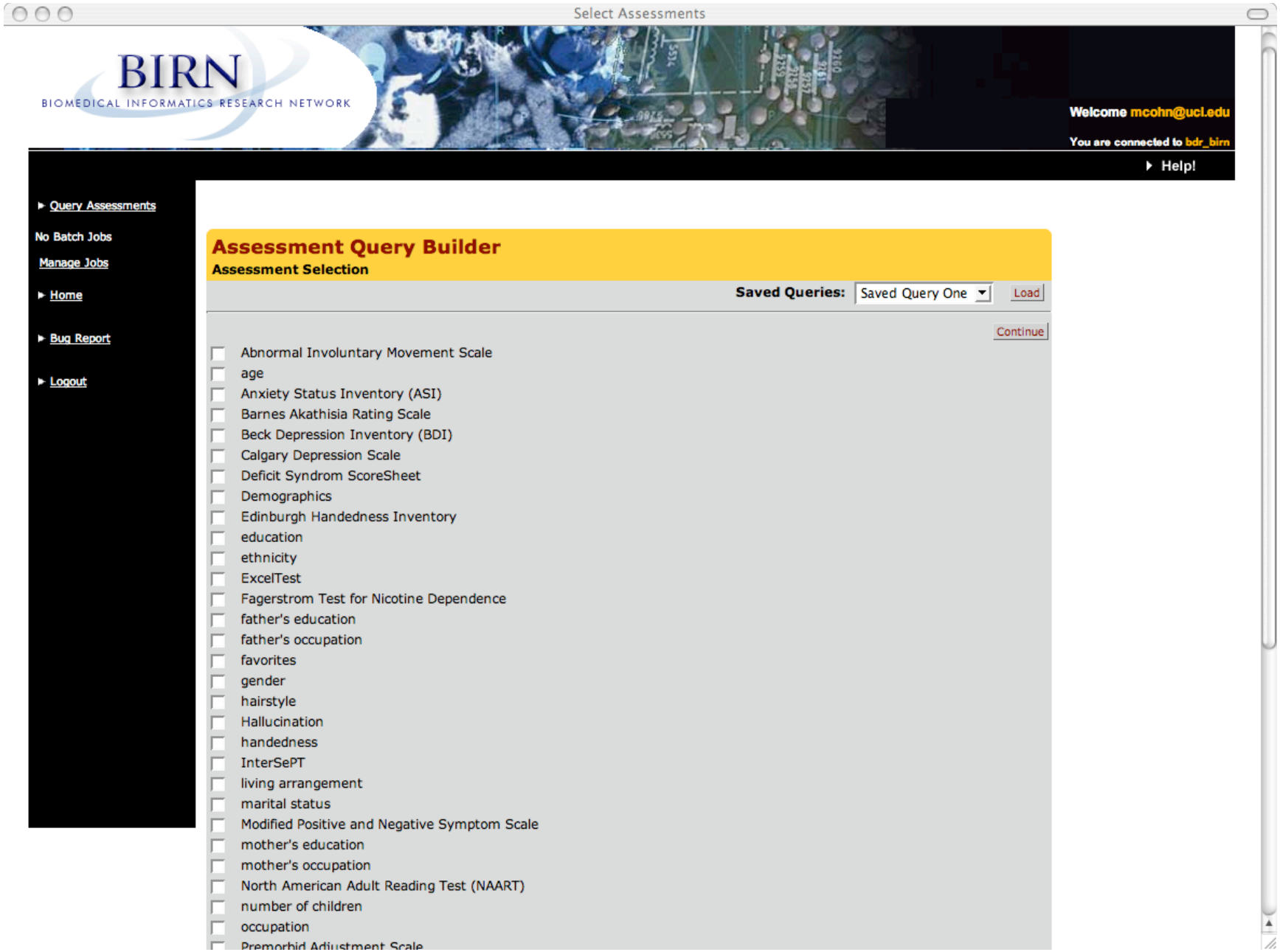
Mentioned on page: 17

Figure 3.4: Save Query Screen



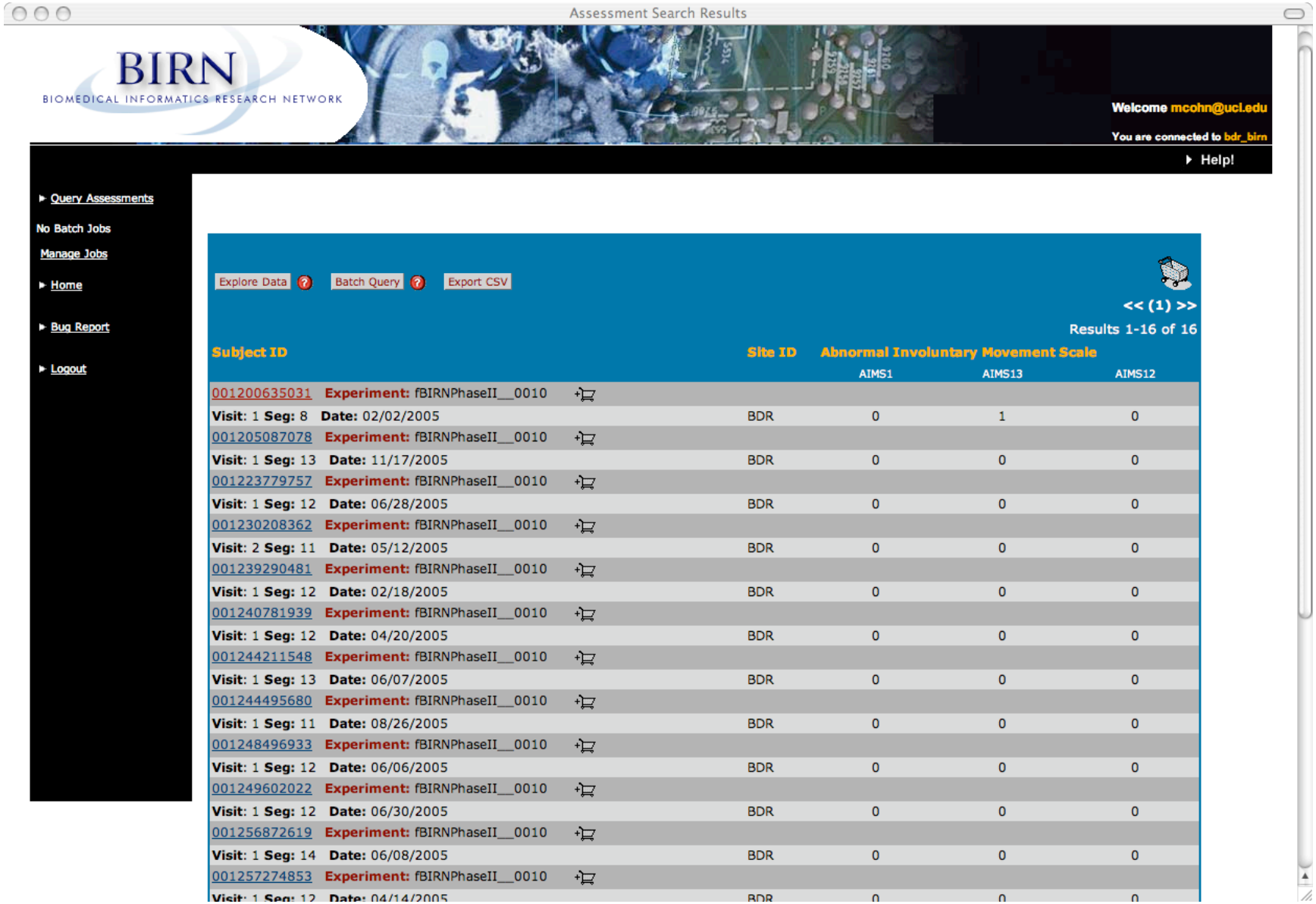
Mentioned on page: 15

Figure 3.5: Assessment Query Builder – Load a Saved Query



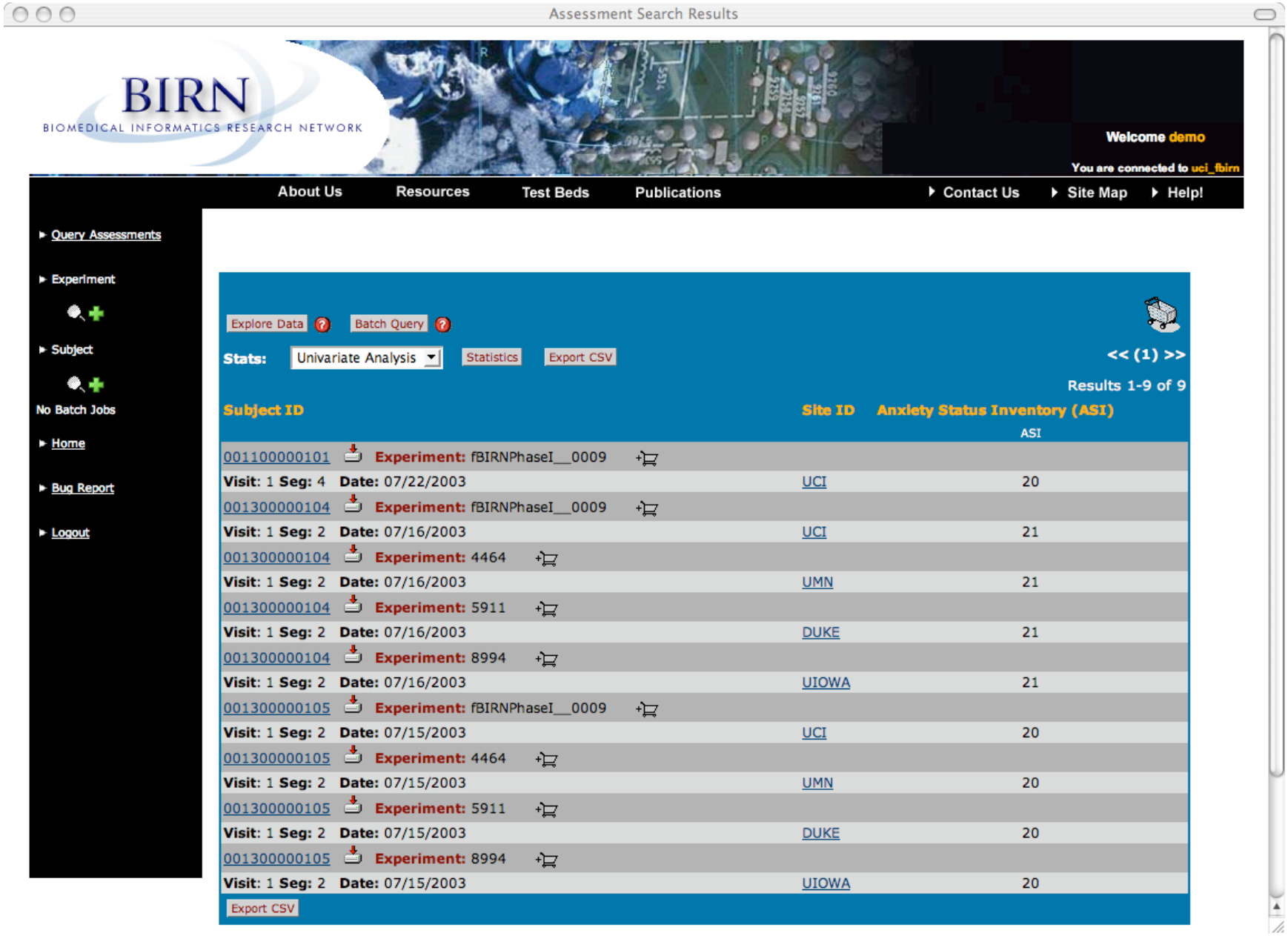
Mentioned on page: 15

Figure 3.6: Query Results Screen



Mentioned on pages: 17-22

Figure 3.6b: Query Results Screen – Mediated Query

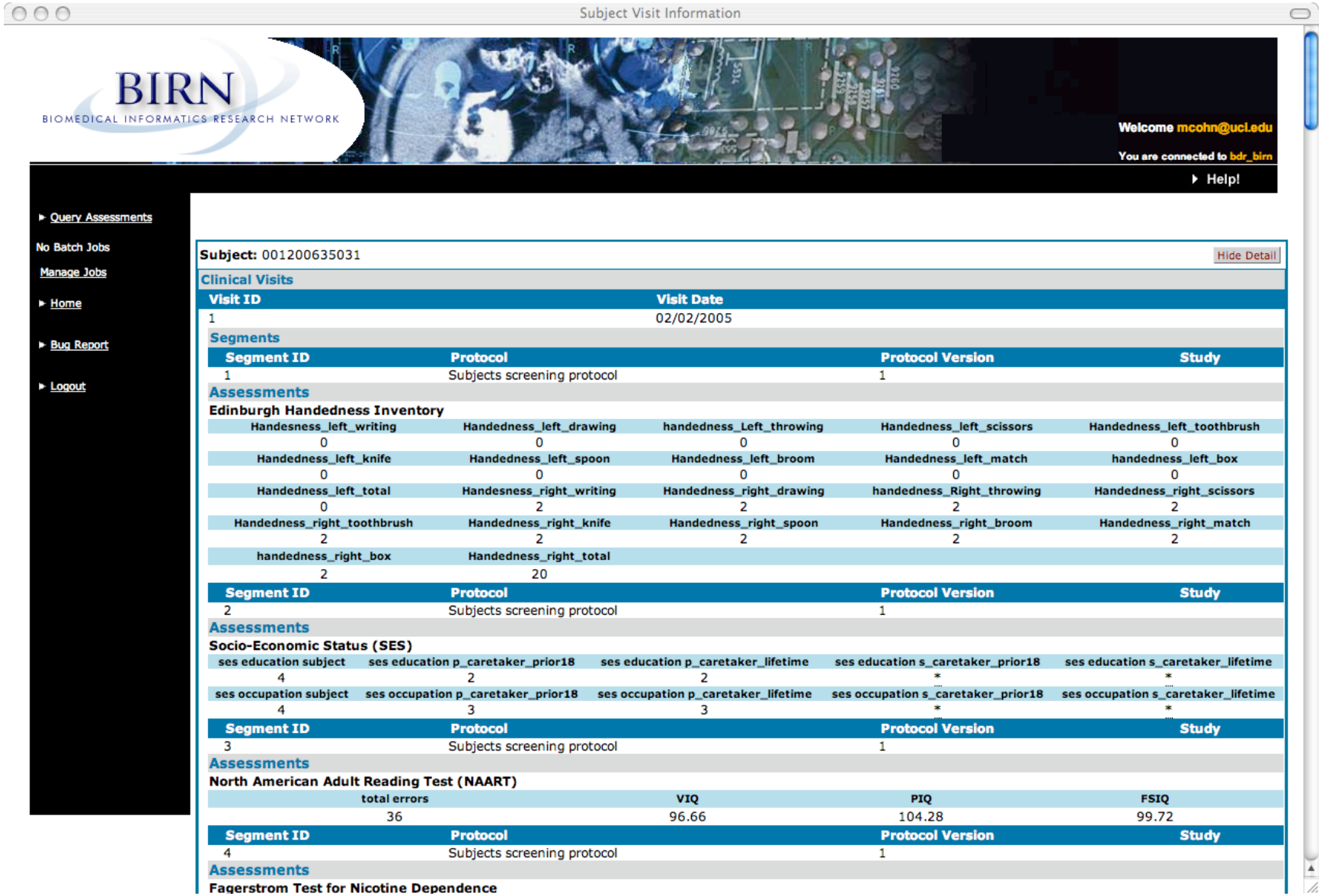


Mentioned on pages: 17, 18

Figure 3.7: Subject Visit Information Screen – Details Hidden

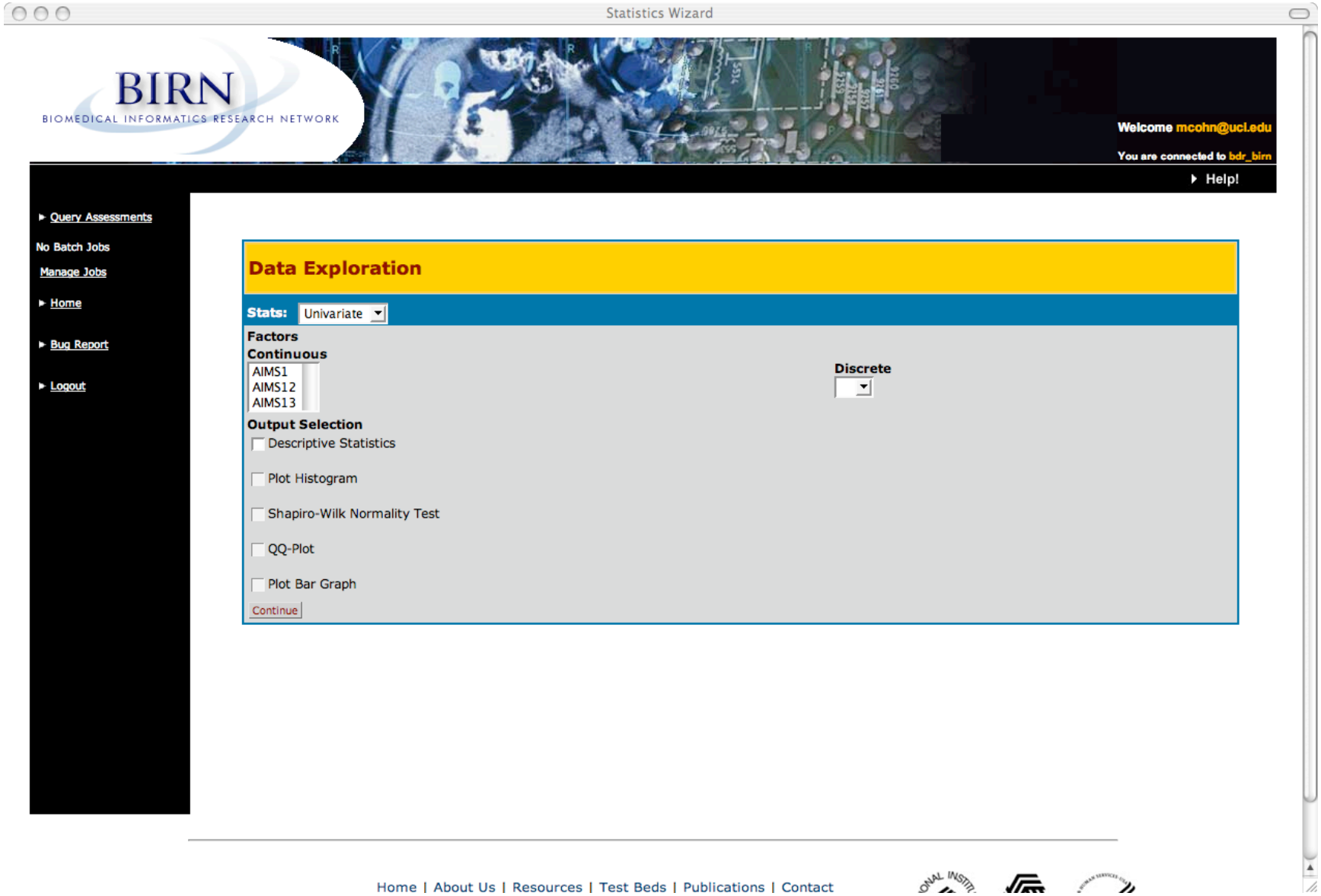
Mentioned on pages: 19, 23

Figure 3.7b: Subject Visit Information Screen – Details Shown



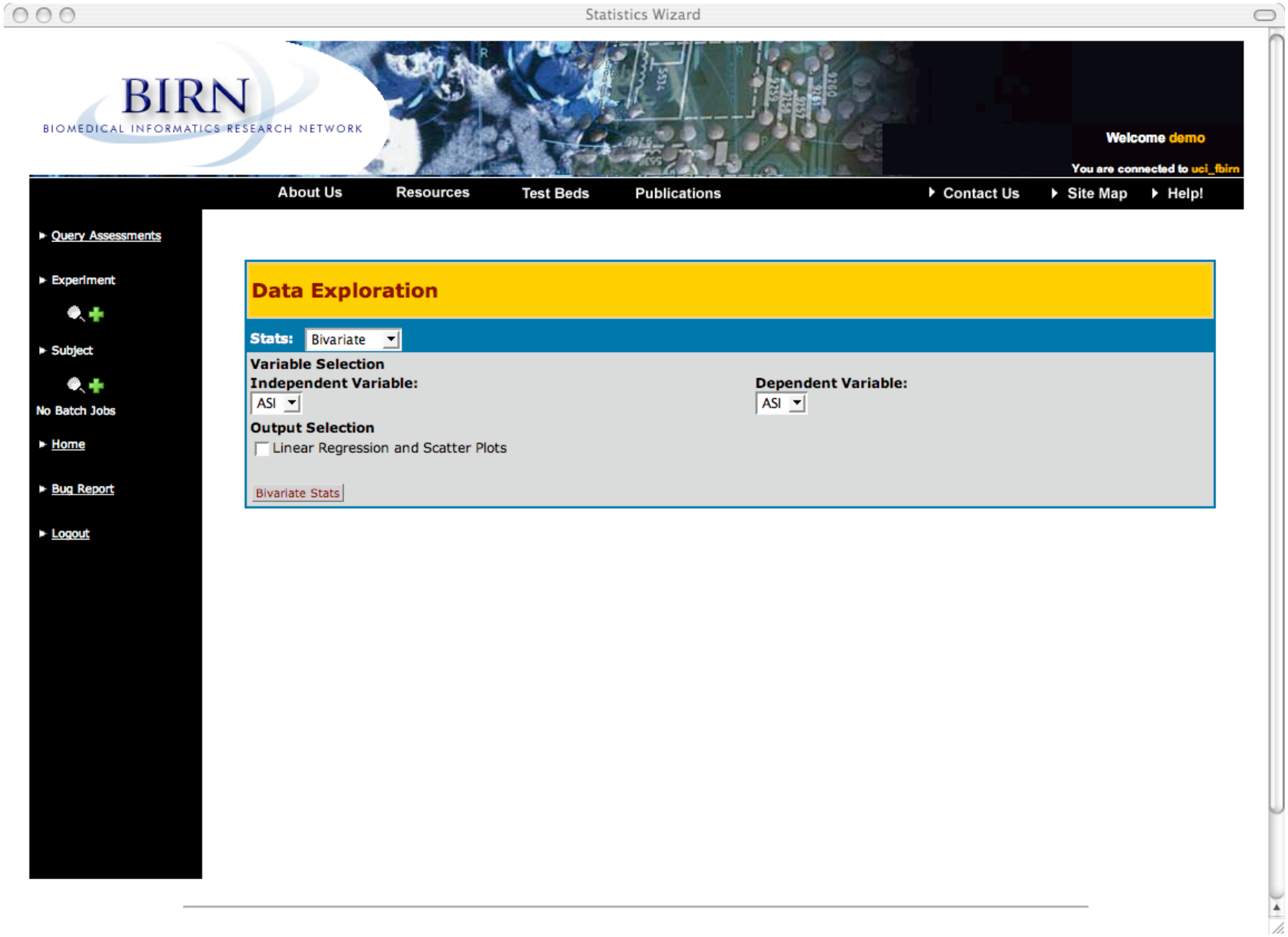
Mentioned on page: 19

Figure 3.8: Data Exploration Screen – Univariate Analysis



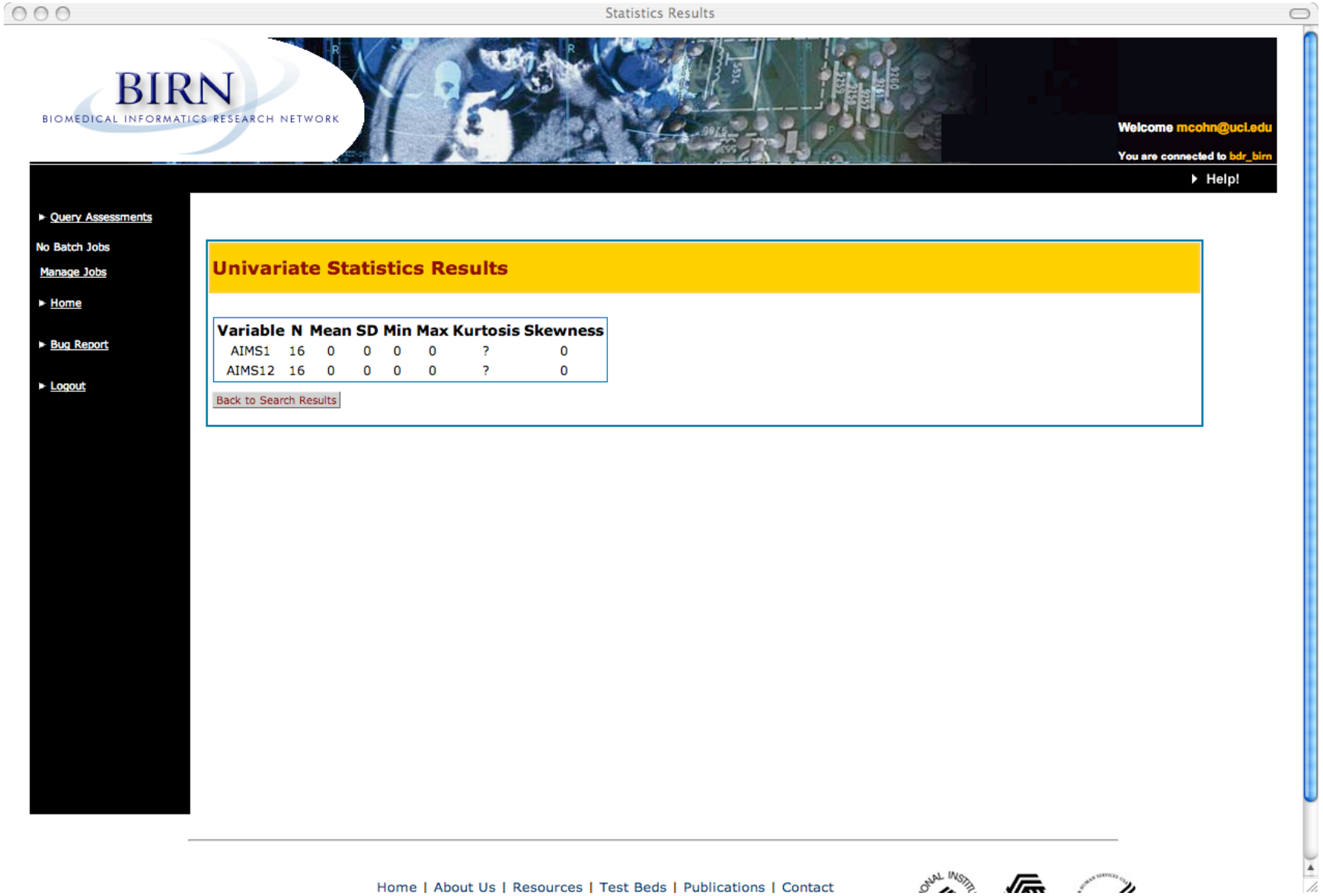
Mentioned on pages: 19, 20

Figure 3.8b: Data Exploration Screen – Bivariate Analysis



Mentioned on pages: 19, 20

Figure 3.9: Statistics Results – Univariate Analysis



Mentioned on page: 19

Figure 3.10: Statistics Results – Bivariate Analysis

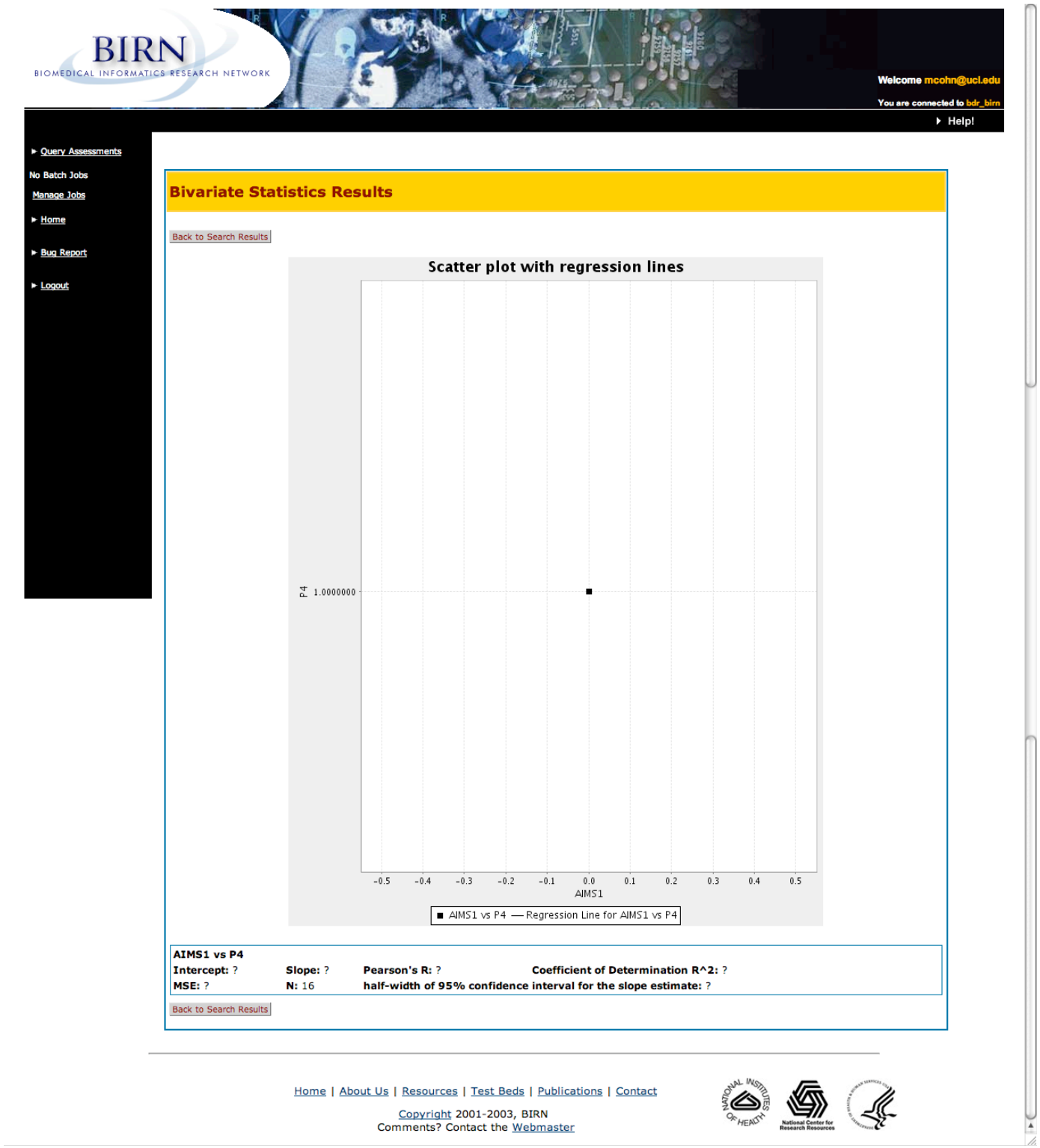


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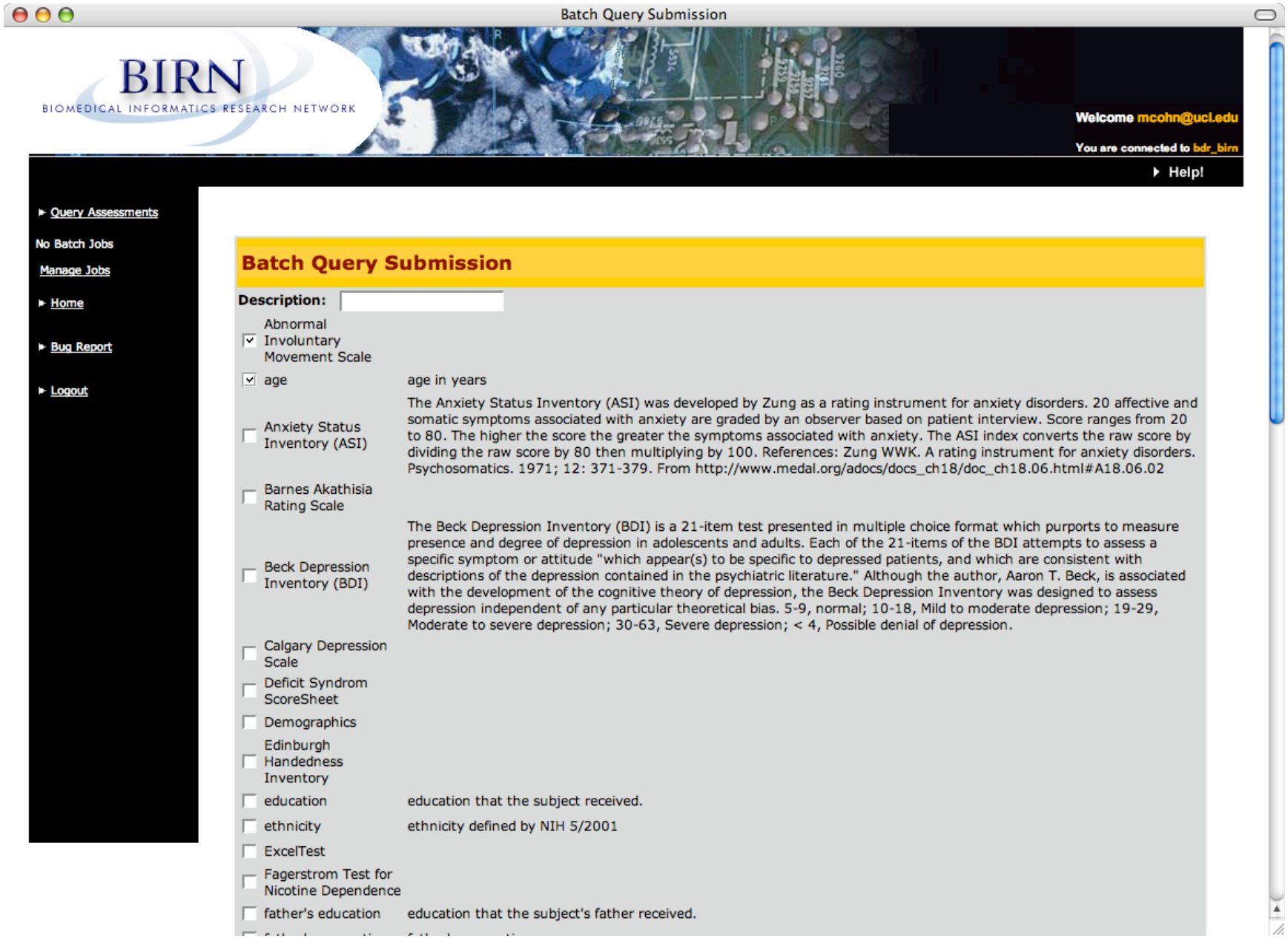
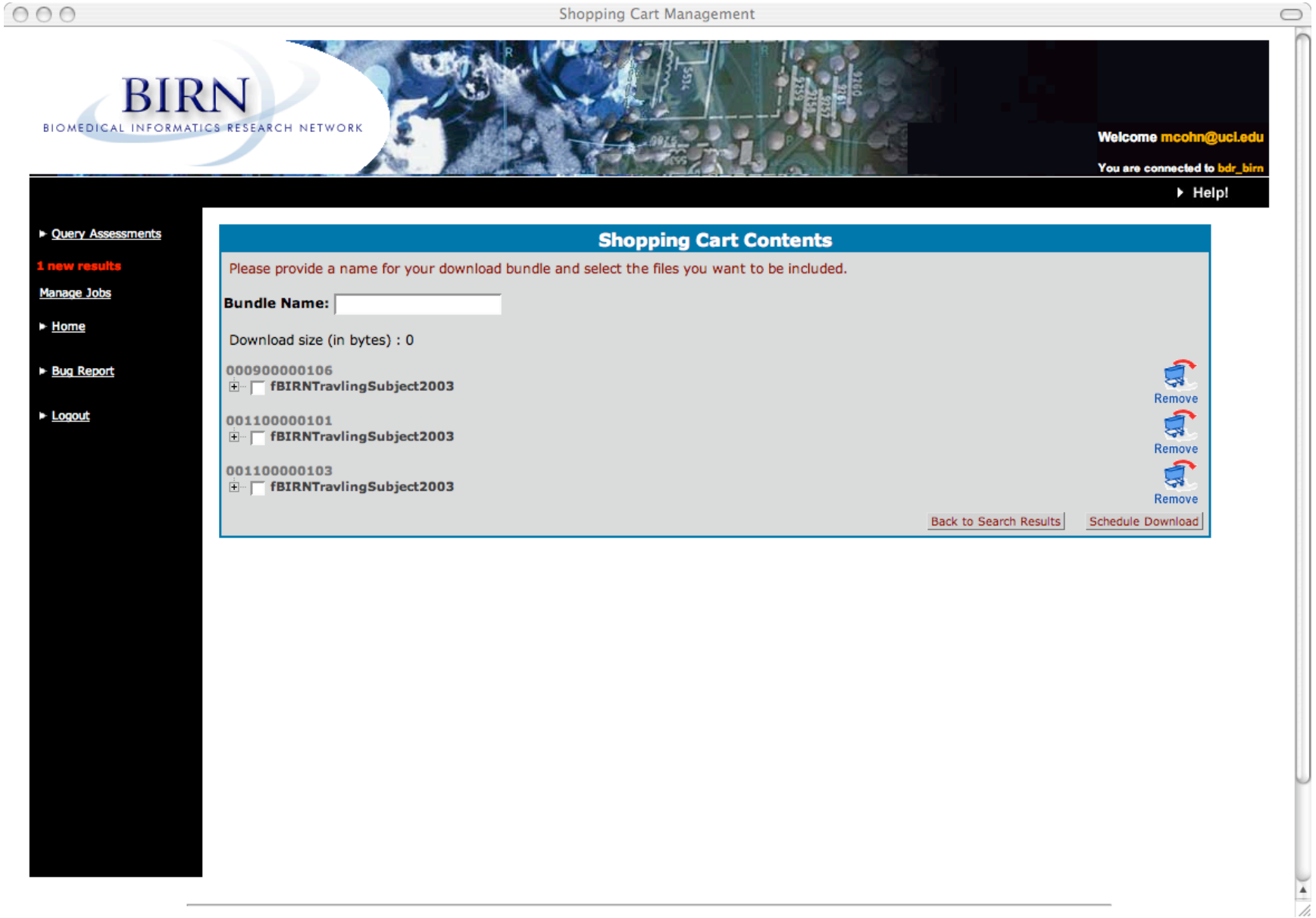
Figure 3.11: Batch Query Submission Screen



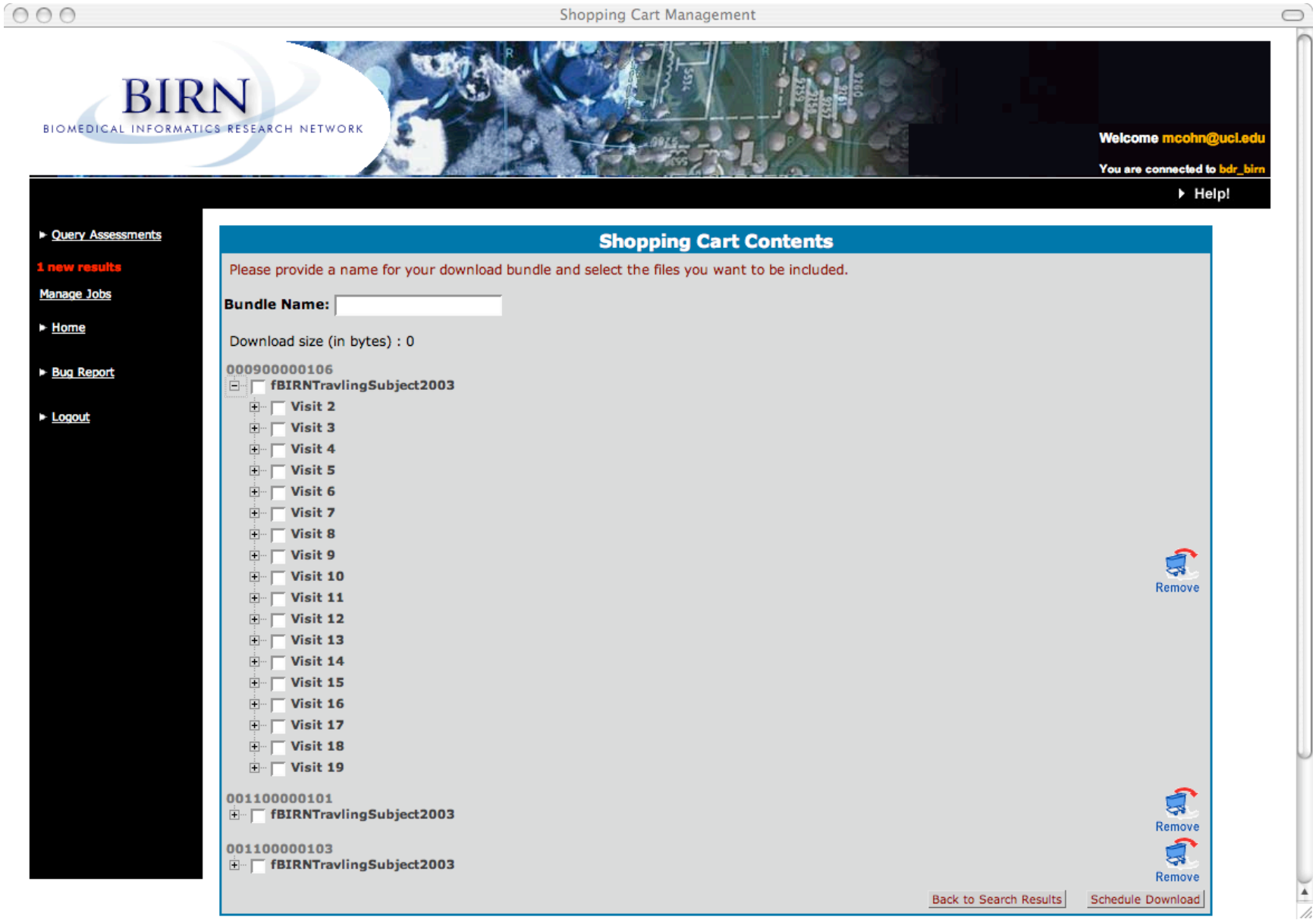
Mentioned on page: 20

Figure 3.12: Shopping Cart Management Screen



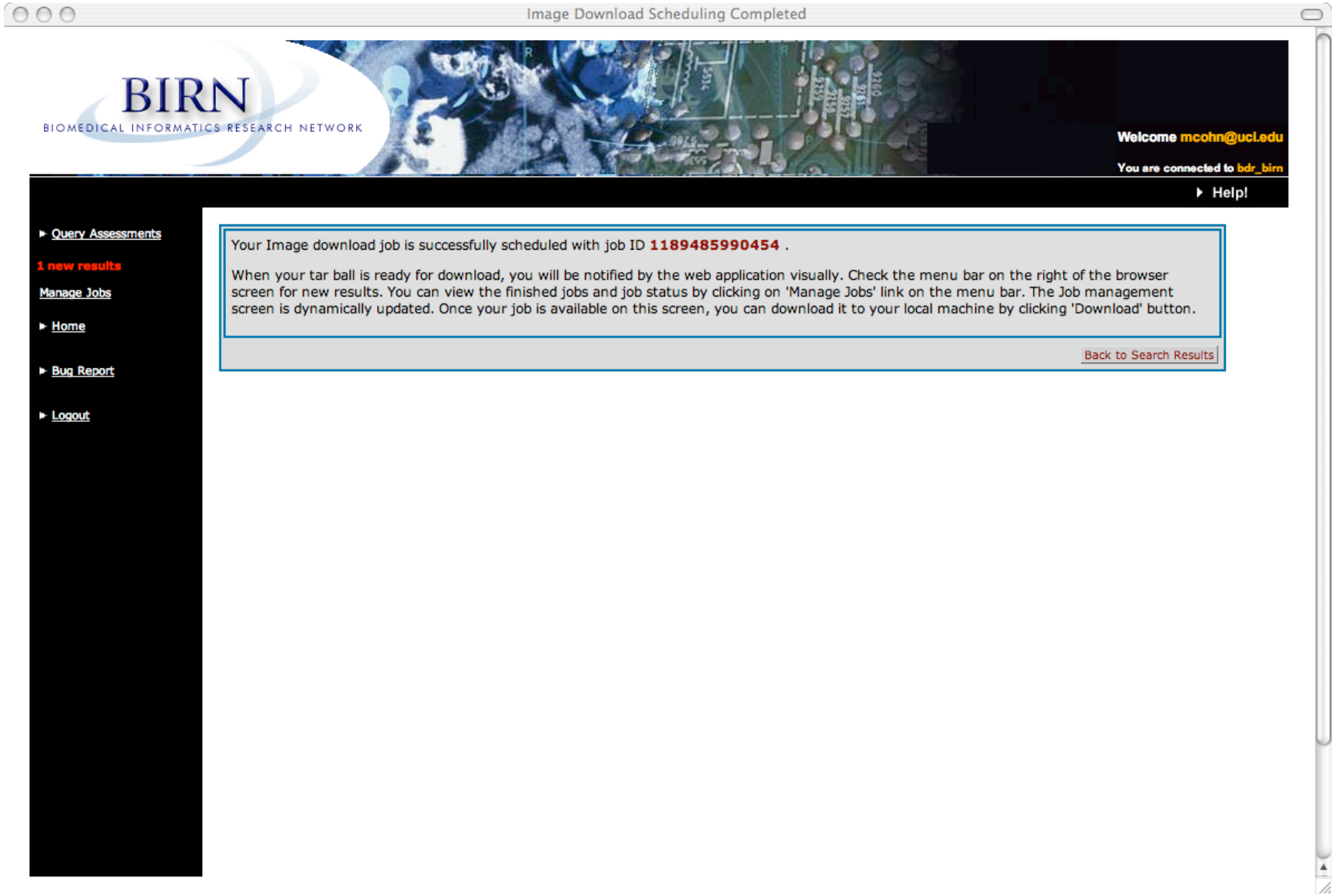
Mentioned on pages: 21, 22

Figure 3.12b: Shopping Cart Management Screen – Navigation Tree



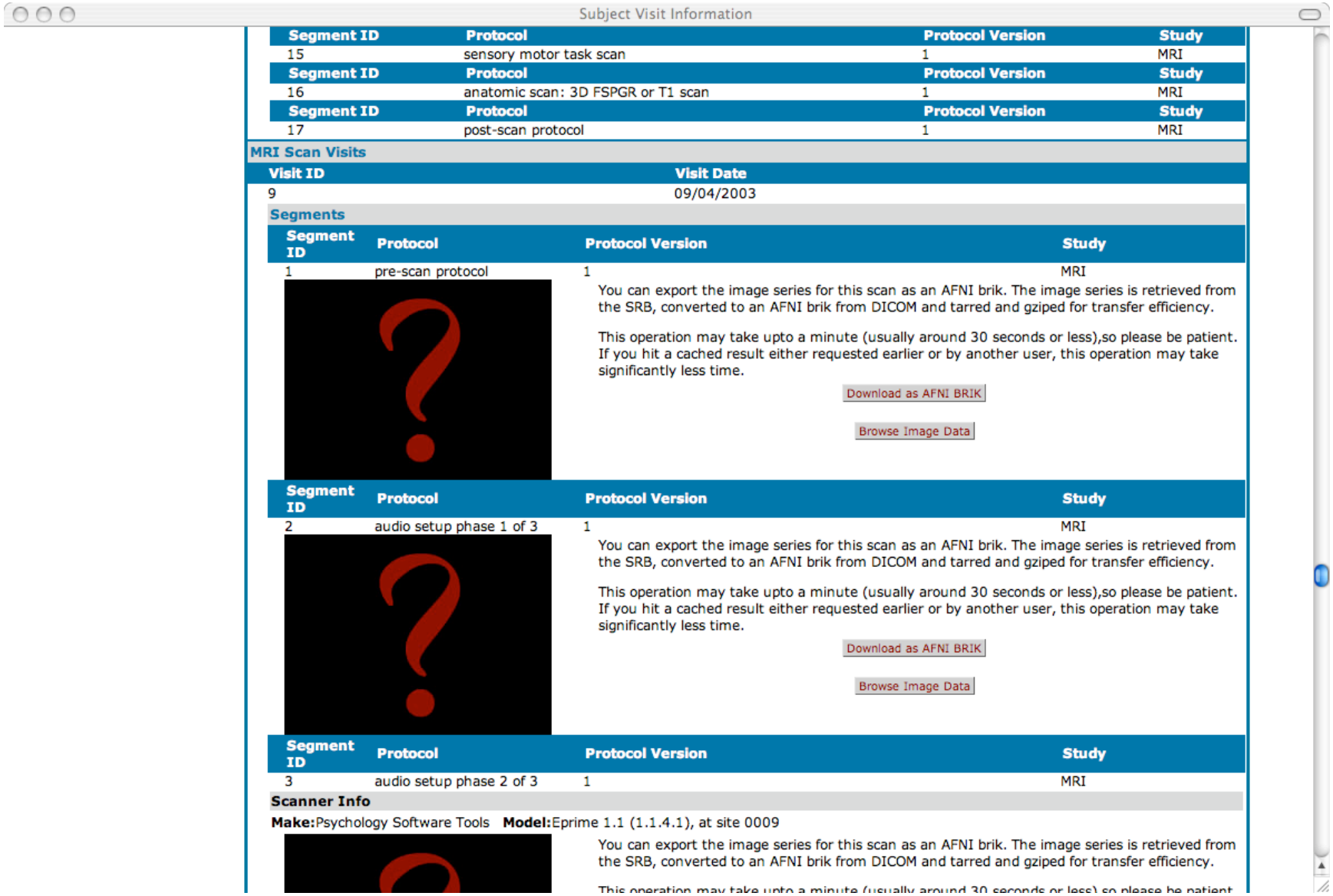
Mentioned on page: 22

Figure 3.13: Scheduled Download Confirmation Message



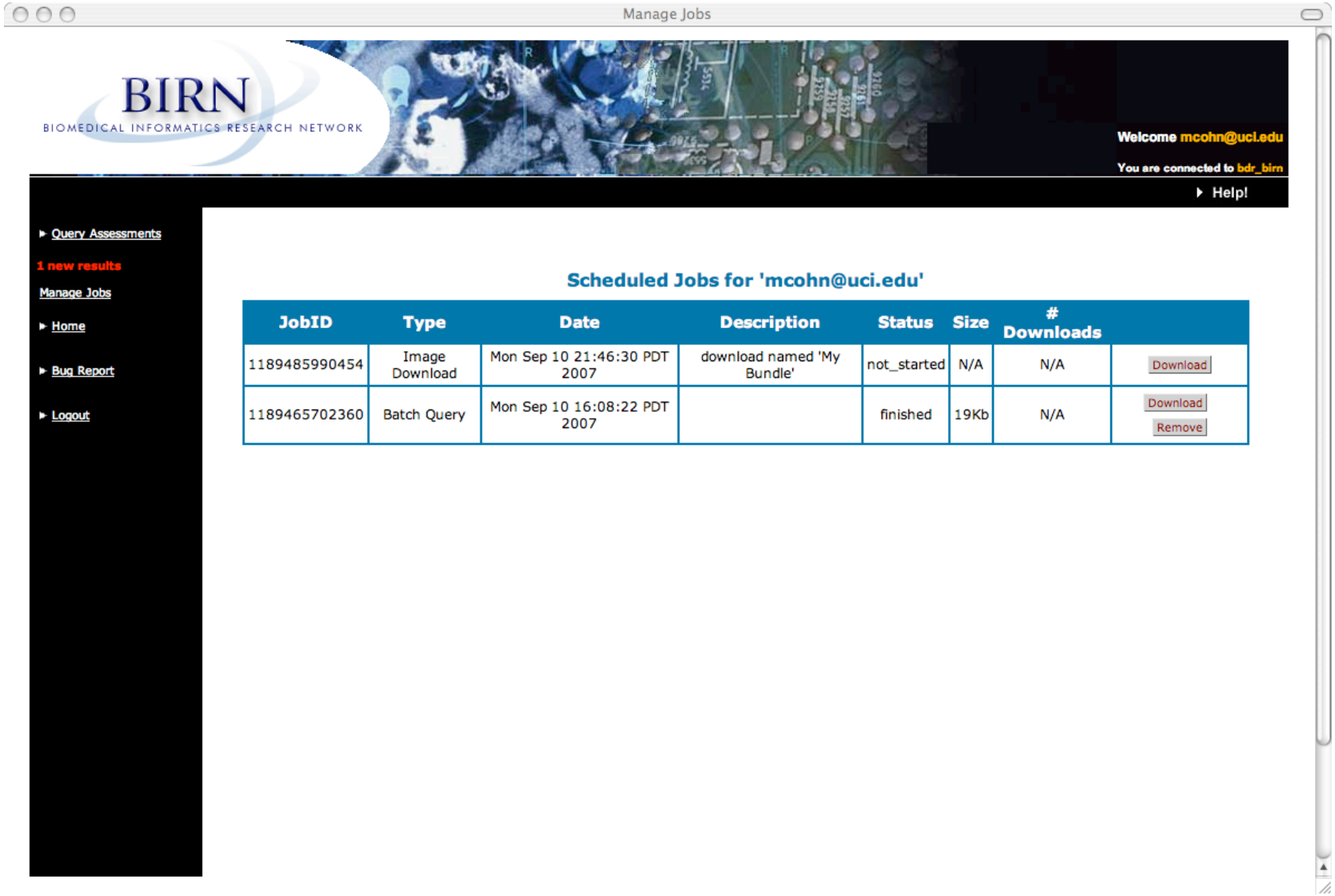
Mentioned on page: 22

Figure 3.14: Subject Visit Information Screen – Image Series



Mentioned on page: 23

Figure 3.15: Job Management Screen



Mentioned on page: 23

Figure 3.16: Database and User Configuration Screen

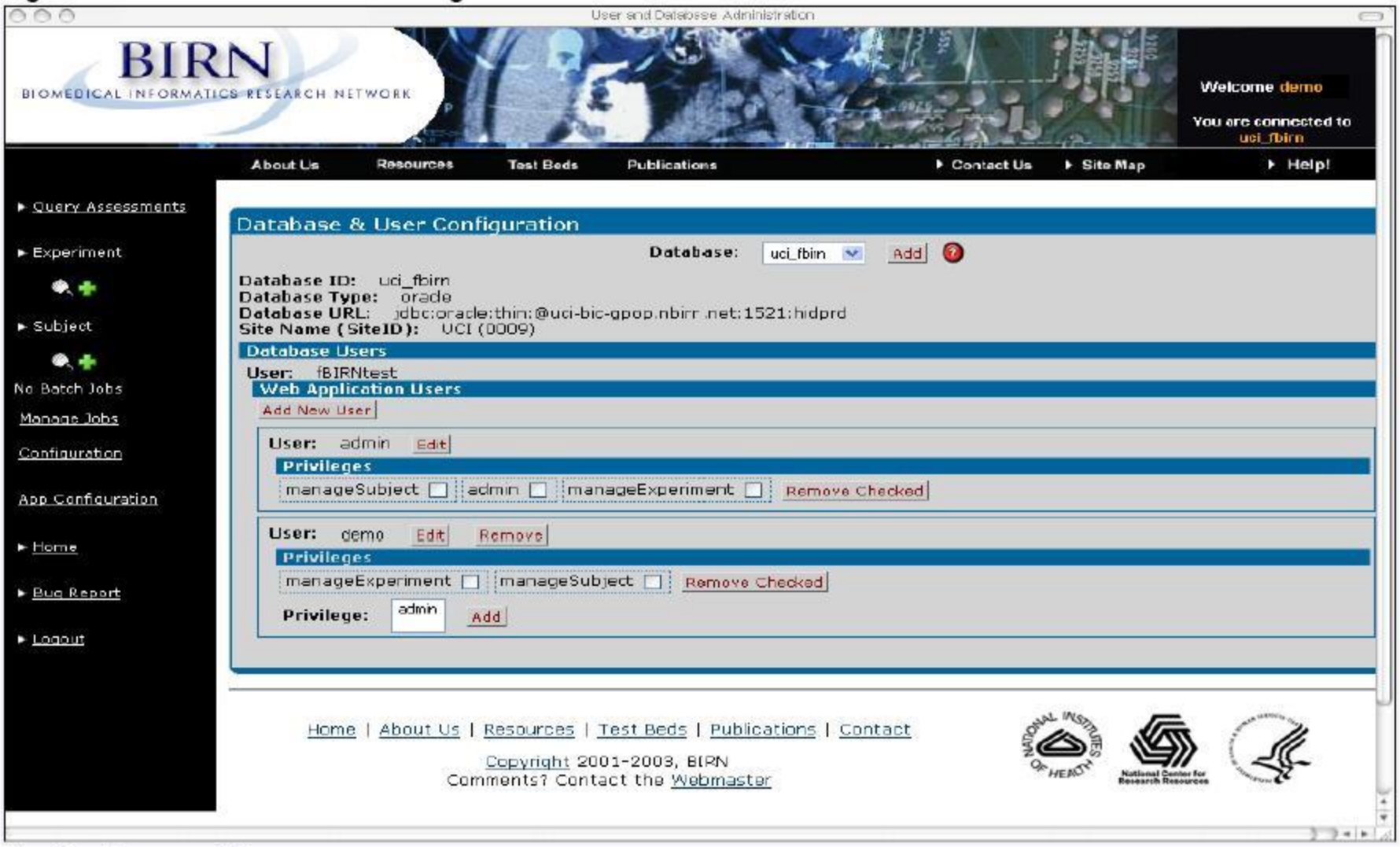


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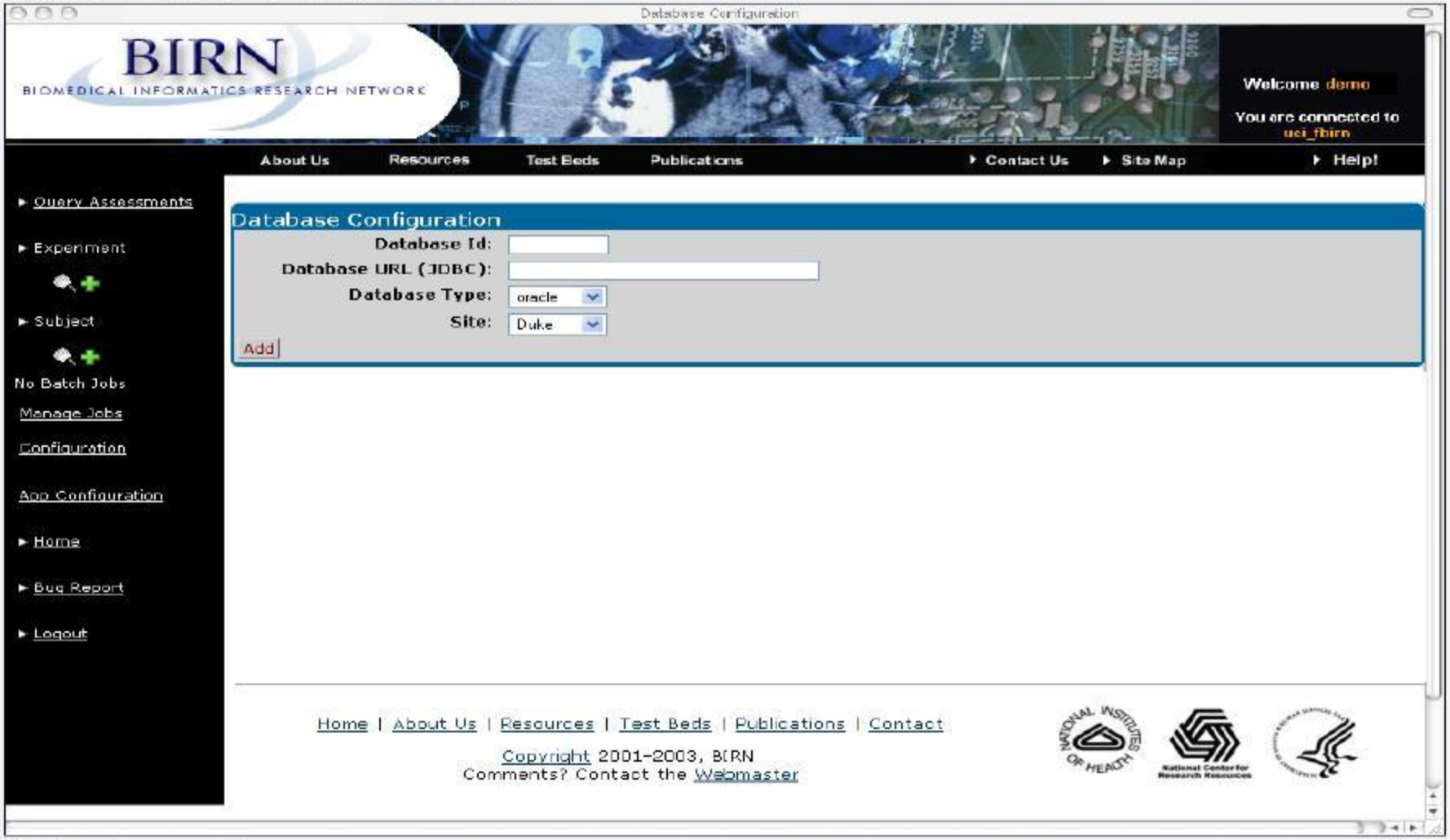
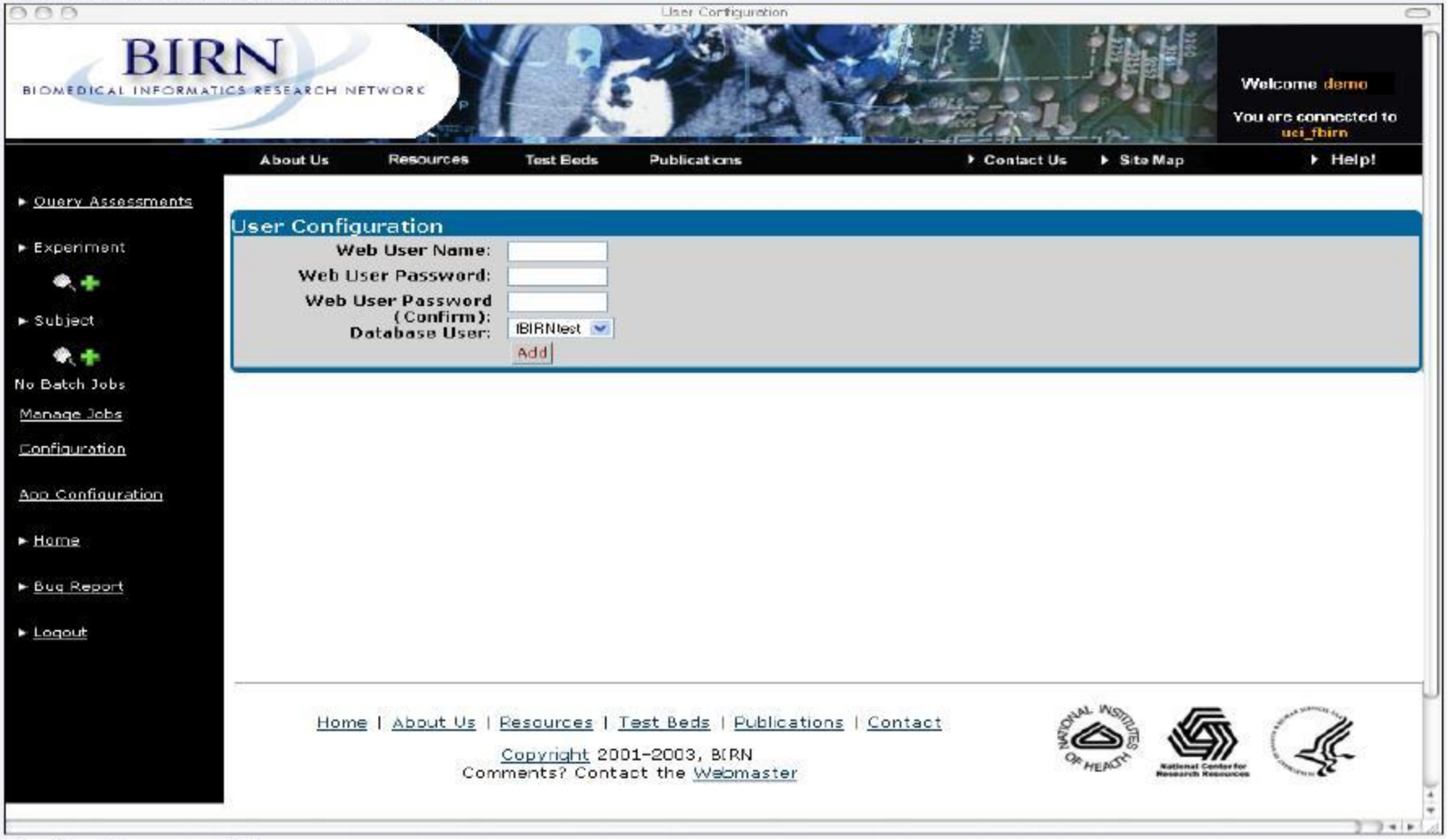
Figure 3.17: Database Configuration Screen



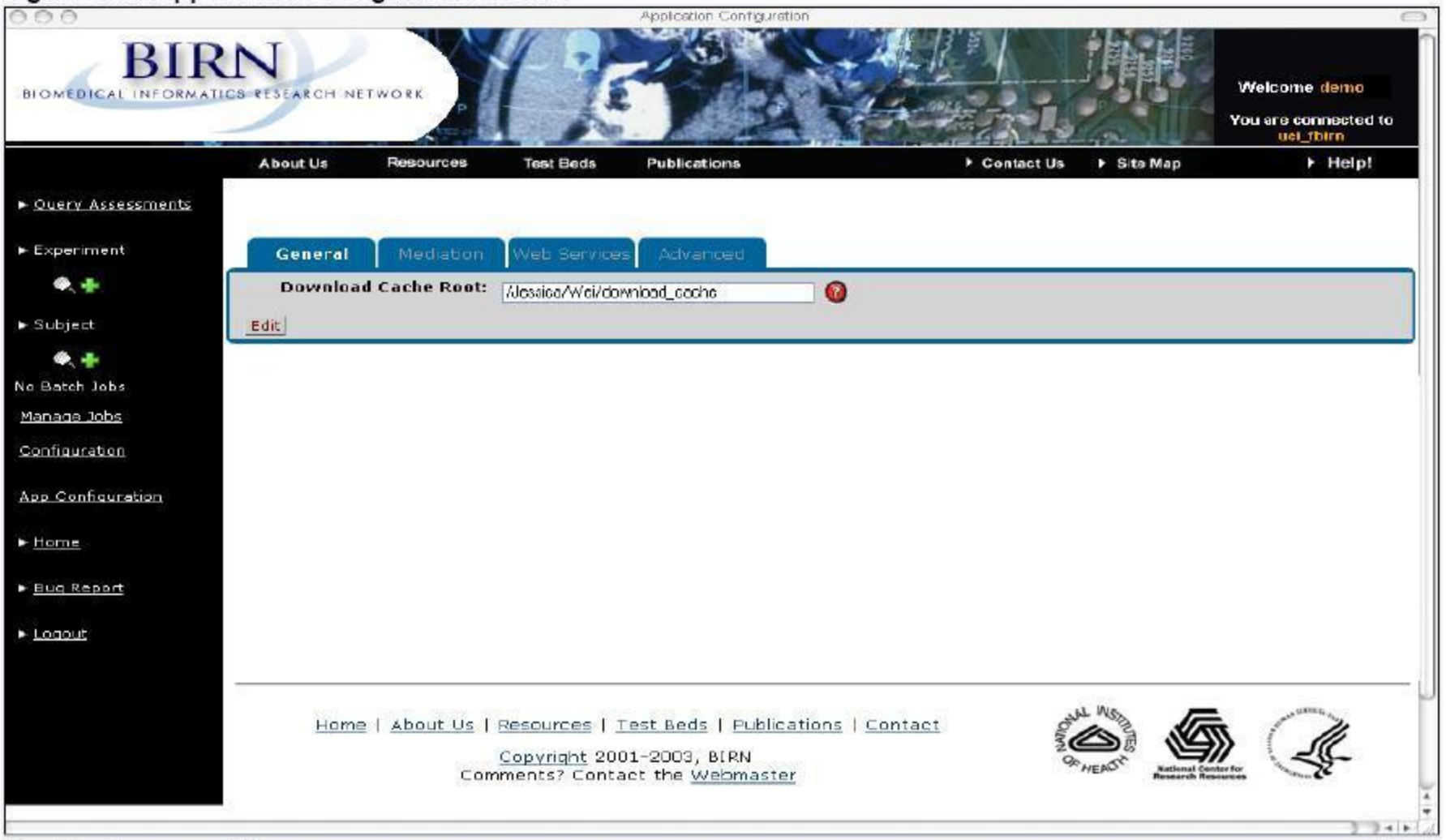
Mentioned on page: 25

Figure 3.18: User Configuration Screen



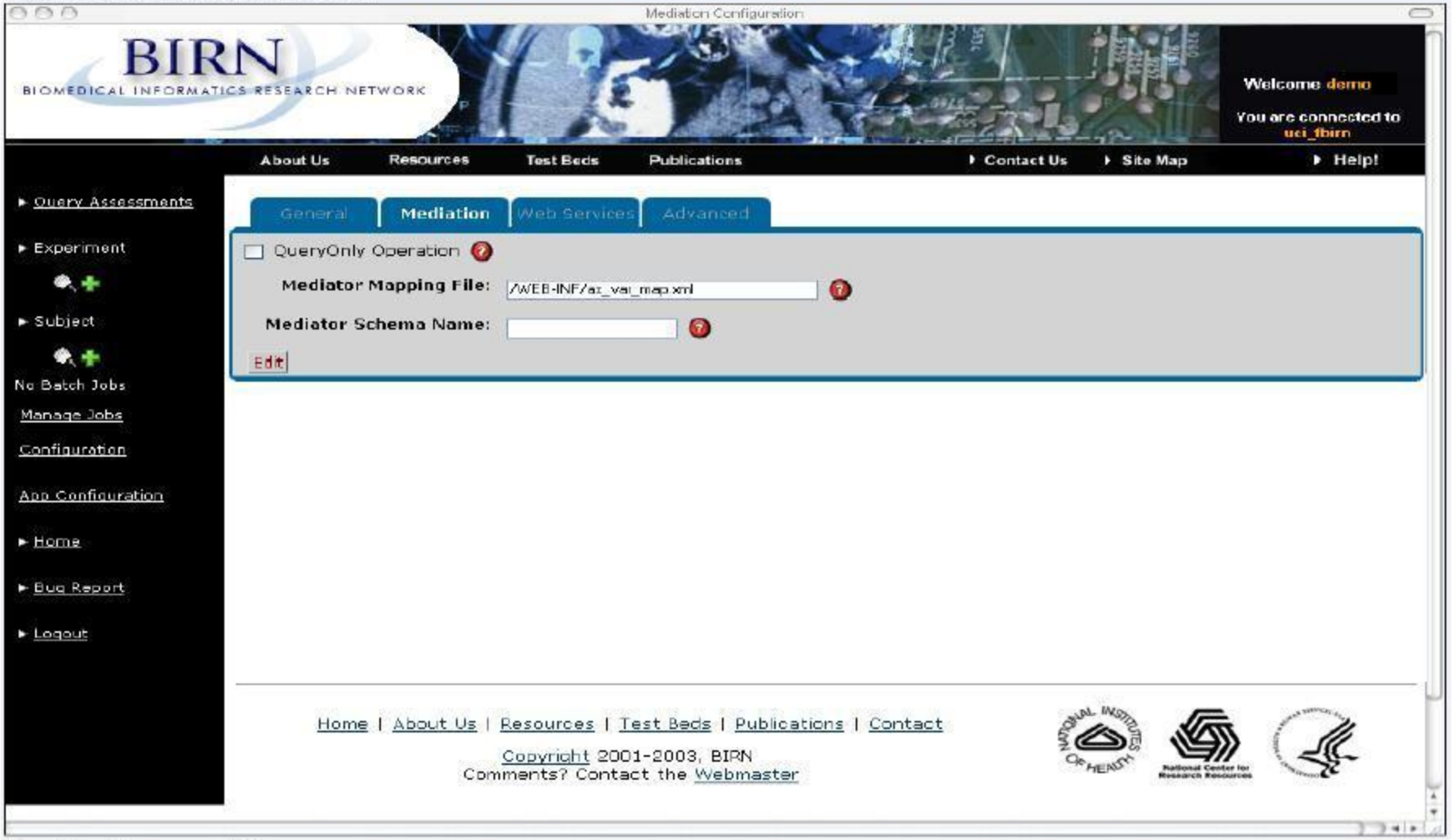
Mentioned on page: 25

Figure 3.19: Application Configuration Screen



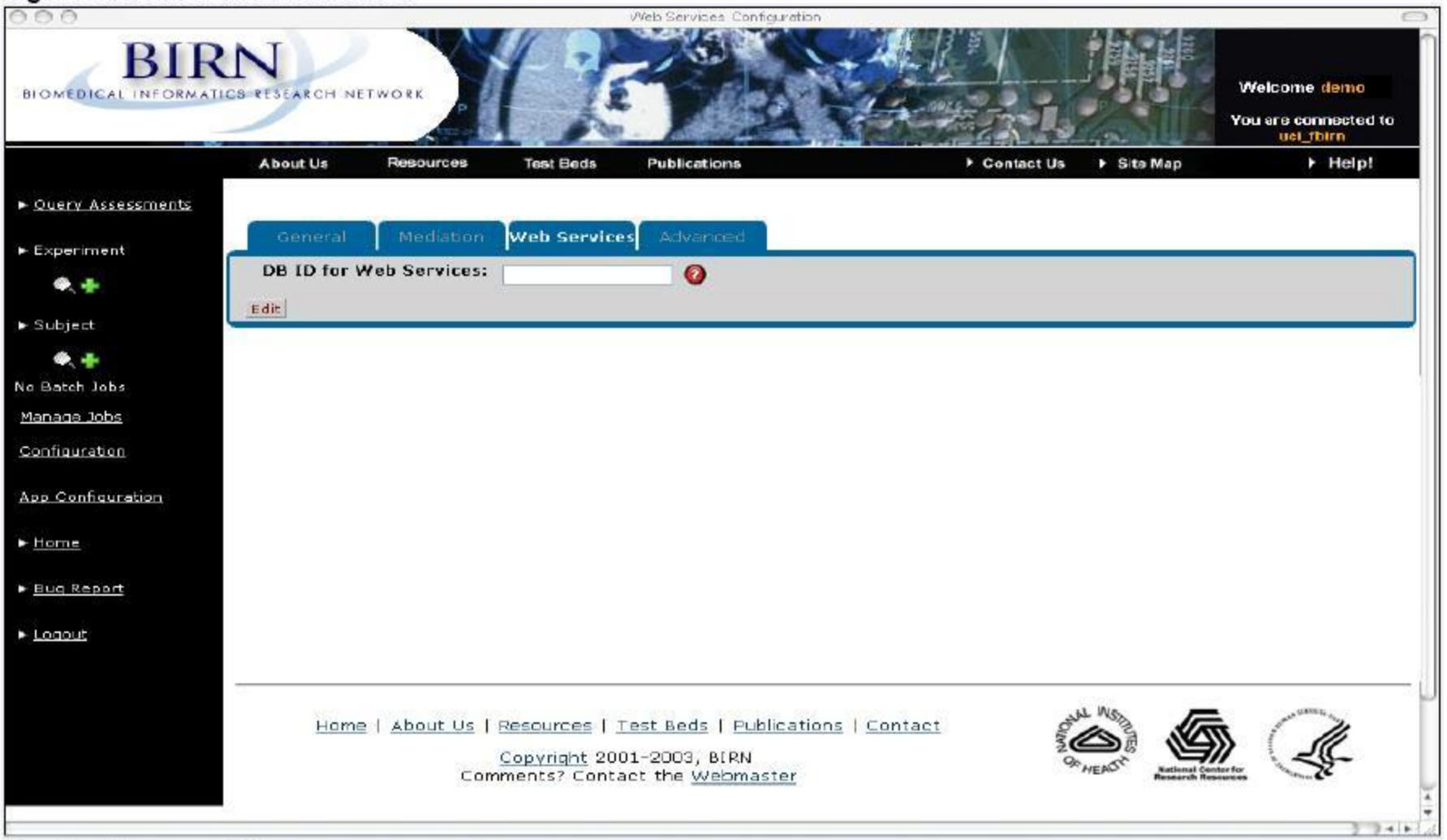
Mentioned on page: 26

Figure 3.20: Mediation Screen



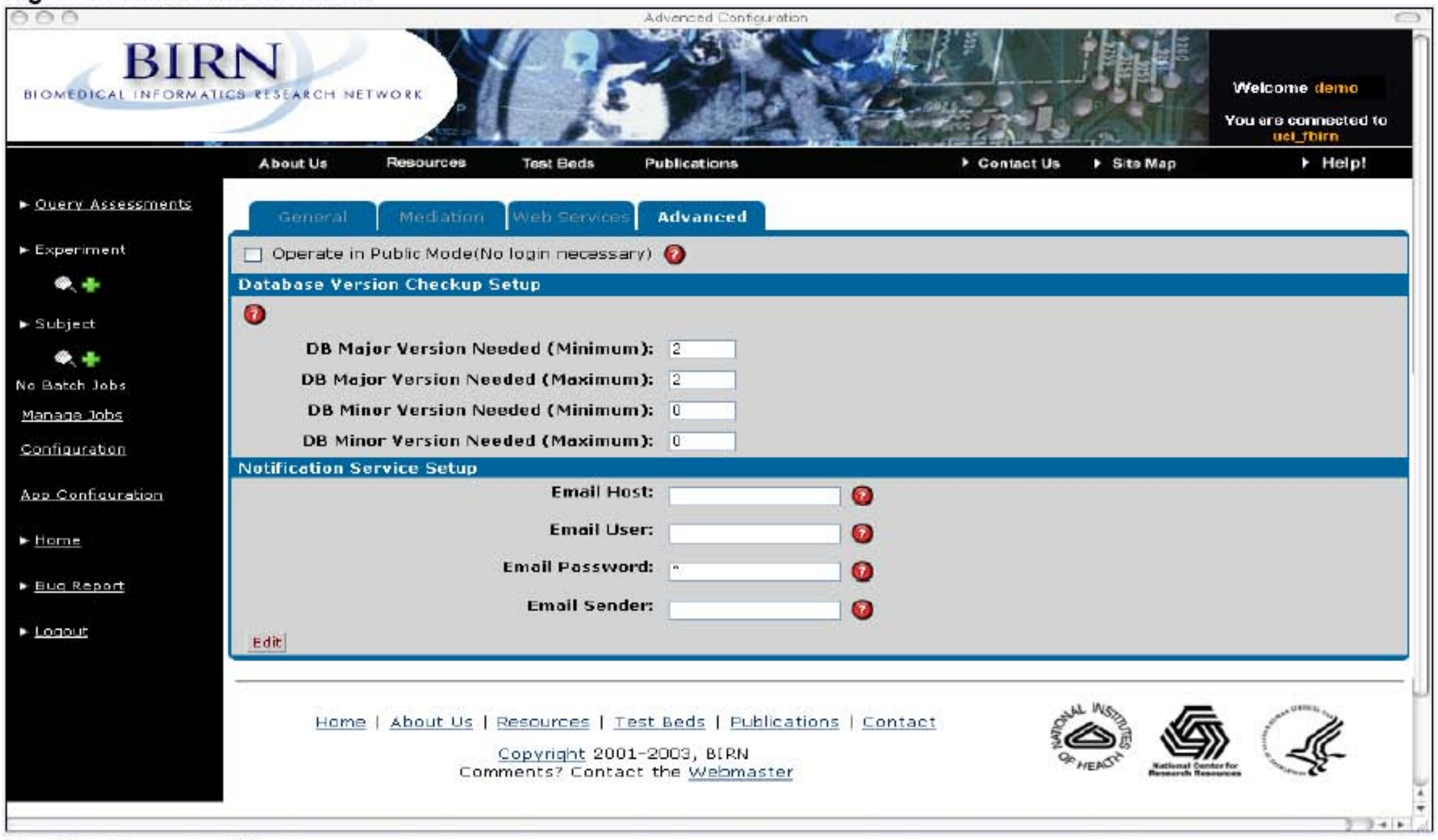
Mentioned on page: 26

Figure 3.21: Web Services Screen



Mentioned on page: 26

Figure 3.22: Advanced Screen



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