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Batch Rename
Plugin

USER MANUAL

User manual for

Batch Rename 1.6

Windows, macOS and Linux

February 23, 2018

This software is for research purposes only.

Contents

Chapter 1

Introduction to Batch Rename

With the Batch Rename it is possible to rename your data in a batch fashion. This will hopefully save you a lot of time when the names of your sequences and analysis results need to be changed.

To run the batch rename tool:

> **Toolbox** | **Utilities** (🖼) | **Batch Rename** (a|e)

This will open the dialog shown in figure 1.1 where you can select the input data.
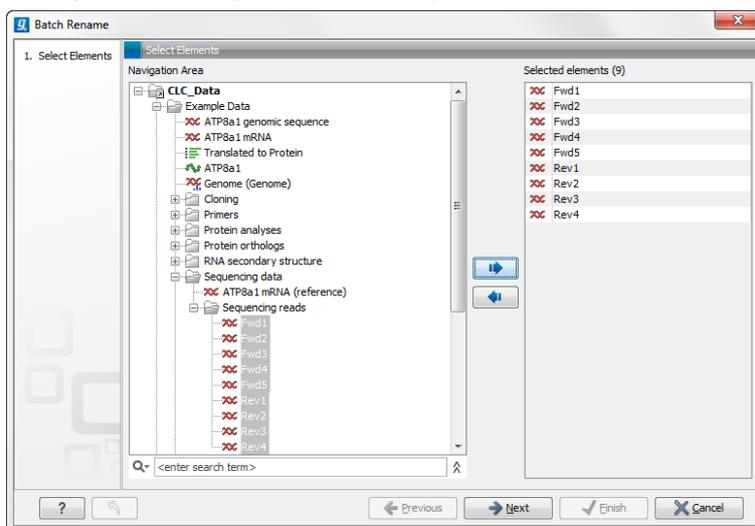

Figure 1.1: *Selecting the data you want to rename.*

Click on the button labeled **Next** to go to the next dialog (see figure 1.2).

Here, one can choose to include or exclude only some of the datat previously selected to work on. For small numbers of data elements, this would not usually be necessary. However, if many data objects were selected at the previous step, for example, to save time when choosing many data elements, you could use the include or exclude functionality at this point so that only certain data elements will be be acted on by the batch rename tool.

The **Include** and **Exclude** filters take the text entered into the respective fields and search for matches in the names of the data elements selected in the first wizard step. Thus, you could enter the full names of particular data elements, or just partial names. Any elements where a
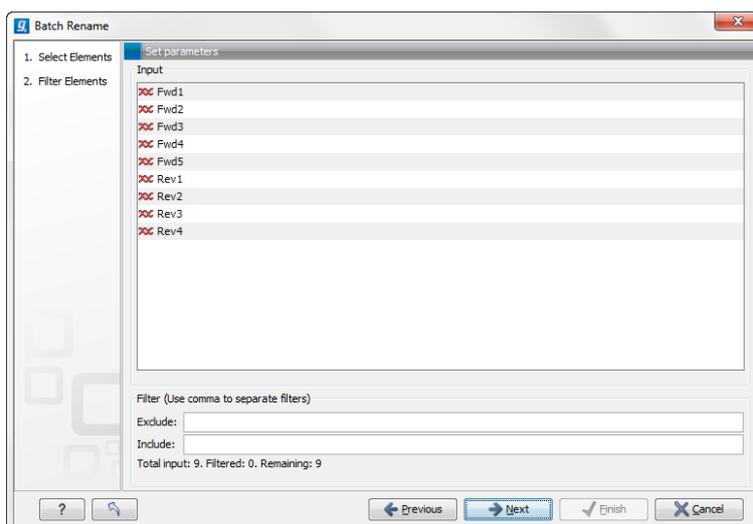
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Figure 1.2: *Select how to filter the input data.*

match is found to the term or terms in the **Include** field will have the batch renaming applied to them. Any elements where a match is found to the term or terms in the **Exclude** field will not have the batch renaming applied to them.

For both filters, if you wish to filter on more than one term at the time, the individual terms must be separated with a comma. An example is shown in figure 1.3.
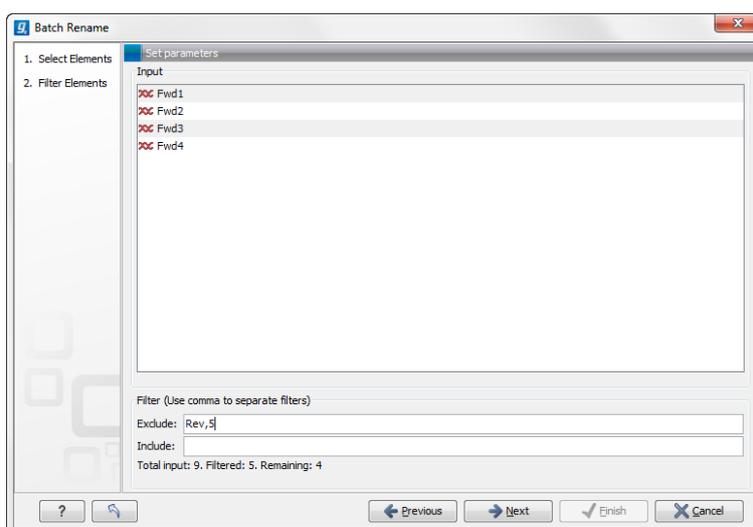

Figure 1.3: *In this case we are looking at primers. The full list of primers can be seen in the previous figure. In this figure the exclude function has been used to filter away all the reverse (Rev) primers as well as primers containing the number 5. In this case we excluded a forward primer "Fwd5". The data that you will exclude are automatically removed from the list above the filters as you type in your restrictions. This allows you to check the consequences of the added filters.*

Click **Next** to go to the next step in the renaming of your data (see figure 1.4). At this step you can specify at which level you wish to perform the renaming. For a single sequence as in the example shown in figure 1.4, this is straightforward because it has just one name, and you would use the **Rename elements**. But if you have a sequence list, for example, you could choose either to rename the list (using **Rename elements**) or the sequences in the list (using **Rename sequences in sequence lists**). The same goes for alignments (using **Rename sequences in alignments**) and

read mappings (using **Rename reads in mappings**). For read mappings, there is also an option to **Rename reference sequence in mappings**.
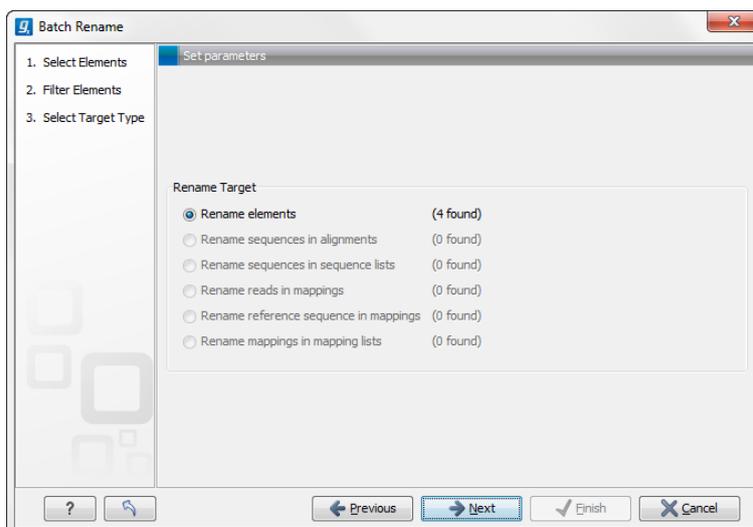

Figure 1.4: *In this example we have four elements left. As we only have one category represented - in this case four primer sequences, the other target type options are disabled.*

Click on the button labeled **Next** to open the last dialog in the renaming procedure (see figure 1.5).
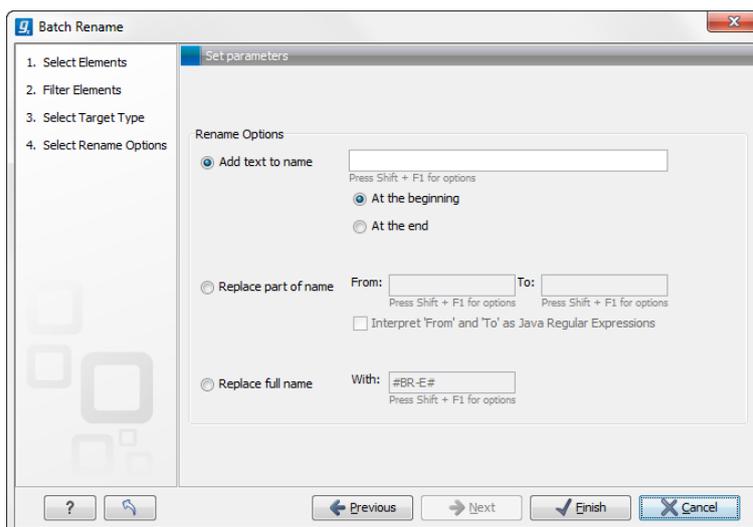

Figure 1.5: *Rename options. At this step you can choose whether you wish to add text to the existing name, replace some of the name, or replace the entire name.*

At this step you can select between three different renaming options. For each text field, you can press Shift+F1 (Shift + Fn + F1 on Mac) to get a drop-down list of advanced placeholder options. The three options are shown in figure 1.6 along with the drop-down list available for the first option:

- **Add text to name** This option will add text at the beginning or the end of the existing name, depending on which you choose. Pressing Shift + F1 (Shift + Fn + F1 on Mac) will enable a list of different renaming options as shown in figure 1.6. The different options are presented as e.g. #BR-E#, which means "Batch Rename - Enumeration" = the current name is kept, and if "At the end" was selected, consecutive numbers will be added directly
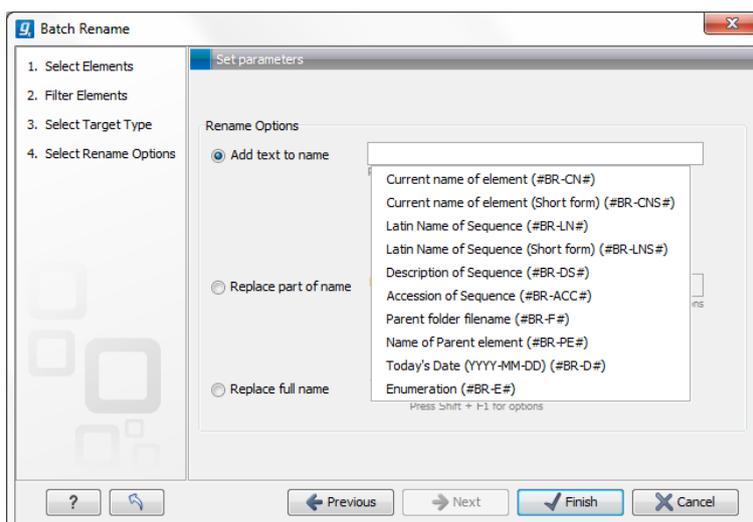
Figure 1.6: *Rename options for addition of text to an existing name.*

after the existing name (without introducing a space between the existing name and the new addition). Please note, that the numbering will follow the order of which the data were selected in the first dialog under "Select Elements".

- **Replace part of name** This is an advanced function that allows to replace e.g. data with completely different names in one go with a new name. This is shown in figure 1.7.
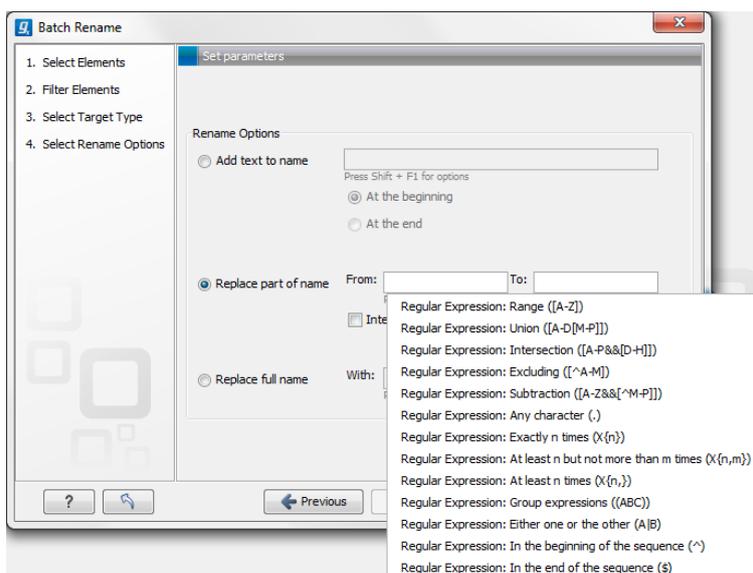
Figure 1.7: *Advanced options for rename of only part of a name.*

The option to replace part of a name is based on regular expressions. Regular expressions allows you to describe text in a flexible manner. For more details, please see: http://docs.oracle.com/javase/tutorial/essential/regex/.

By clicking in either the From: or To: box and pressing the Shift and F1 keys at the same time (Shift + Fn + F1 on Mac), you will see a drop down list of renaming possibilities. The options listed for the From: field are some of the most commonly used regular expressions. Other standard regular expressions are also admissible in this field. **Note!** Please ensure that if you choose any of these options, or other regular expressions, that you check in the

box labeled "Interpret From as Java Regular Expressions". If you do not check this box, then the characters you enter in the From box will be interpreted literally. For example, a full stop or period (.) is interpreted as that character (.) when this box is not checked, but is interpreted as meaning any single character when the box is checked.

An example: if you enter "From:" "Regular Expression: Range ([A-Z]) "To:" "Enumeration (#BR-E#)", titles containing any (capital) letters will be renamed to consecutive numbers. A more advanced example where the sequences shown in the images earlier in this manual are used is shown in figure 1.8. The sequence names contain both a capital letter, small letters and a number. In the first, the number is kept and a date is added in front of the number.
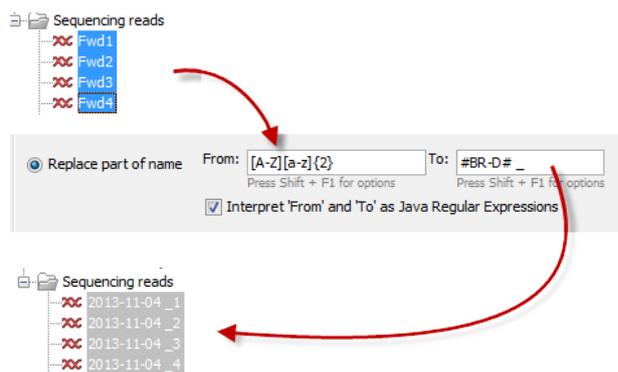

Figure 1.8: *The letters "Fwd" are removed from the primer name and replaced with "Today's date". In this case we have also inserted a space and a "_" between the date and the number, which was the only thing that was left from the original primer name. Please note that in order to be able to remove both of the small letters in the primer name, you have to add 2, which indicates that [a-z] should be performed twice.*

As this can be a bit difficult to grasp, we will look at three more examples. We will use the name **1N R1_0001** in the two first examples:

1. First we want to **keep only the first 4 none-whitespace characters of the name(s)**. To do this write the following in the "From" and "To" fields shown in figure 1.8:
   From: `(^\S{4}).*`
   Nomenclature: `^: start of the line,\S: none-whitespace characters, {4}: 4 characters,.*: everything after the pattern`
   To: `$1`
   Nomenclature: `$1: the first group in the "From" field`
   The result of this is that *1NR1* is kept, whereas the space between "N" and "R1" and *_0001* have been discarded.

2. If we would like to **keep only the last 4 characters of the name(s)**:
   From: `(.*)(.{4}$)`
   Nomenclature: `(.*): the first group, (.{4}$): any 4 character at the end of the line as the second group`
   To: `$2`
   Nomenclature: `$2: the second group in the "From" field`
   The result of this is that *0001* is kept, whereas *1N R1_* has been discarded.

3. Now we would like to **replace the first letter followed by 9 numbers in the name "p140101034_1R_AMR" with the parent folder name, which in this case is "AmericanSamples"**.

    From: ([A-Z]\d{9})(.*)

    Nomenclature: [A-Z]: any character

    (as long as they are part of [A-Z][a-z], the CLC software do not differentiate between upper/lower case),

    \d{9}: any 9 digit numbers, (.*): the second group of the name (anything after the "([A-Z]\d{9})" pattern).

    To: #BR-F#$2

    Nomenclature: $2: the second group in the "From" field.

    The result of this is that we have replaced "p140101034" with "AmericanSamples" and as a result have changed the name from p140101034_1R_AMR to AmericanSamples_1R_AMR.

4. If we want to extract and use the text "sample-code" for the new name from the following "1234_sample-code_5678" with Java Regular Expressions:

    From: (^[^_]+)_([^_]+)_(.*)

    Nomenclature: ^[^_]+: Starting from the beginning and match anything before the first underscore,

    [^_]+: will match anything and stop before the second underscore.

    After the second underscore, the match will include the rest of the name.

    To: $2

    Nomenclature: $2: includes the match from the second group, which is flanked between the first and the second underscore symbols of the name.

- **Replace full name** Allows replacement of the entire name with the name that is either typed directly into the text field, or with options that can be selected when pressing Shift + F1 (Shift + Fn + F1 on Mac). Figure 1.9 shows an example where a combination of "Shift +F1" (Shift + Fn + F1 on Mac) options (#BR-D# and#BR-E#) are used together with user-defined text (RNA-Seq).
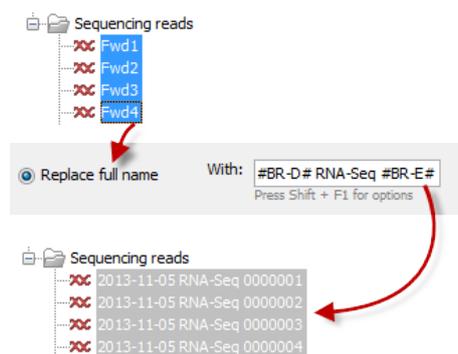

Figure 1.9: *The entire name is removed from the primer names and is replaced with "Today's date" (#BR-D#), the userdefined text: RNA-Seq, and the addition of consecutive numbers (#BR-E#). In this case we have inserted a space between the date, the user-defined text and the added number. If commas were inserted instead, the commas would be part of the new name as everything that is typed into the text field will be used in the new name when renaming the entire name.*

Click **Finish** to start renaming. Please note that the **rename cannot be undone** and that it does not show up in the **History** ( ).

Chapter 2

Install and uninstall plugins

Batch Rename is installed as a plugin.

Note: In order to install plugins and modules, the Workbench must be run in administrator mode. On Linux and Mac, it means you must be logged in as an administrator. On Windows, you can do this by right-clicking the program shortcut and choosing "Run as Administrator".

Plugins are installed and uninstalled using the plugin manager.

Help in the Menu Bar | **Plugins... (** 🧩 **) or Plugins (** 🧩 **) in the Toolbar**

The plugin manager has two tabs at the top:

- **Manage Plugins.** This is an overview of plugins that are installed.

- **Download Plugins.** This is an overview of available plugins on QIAGEN Aarhus server.

2.1 Install

To install a plugin, click the **Download Plugins** tab. This will display an overview of the plugins that are available for download and installation (see figure 2.1).
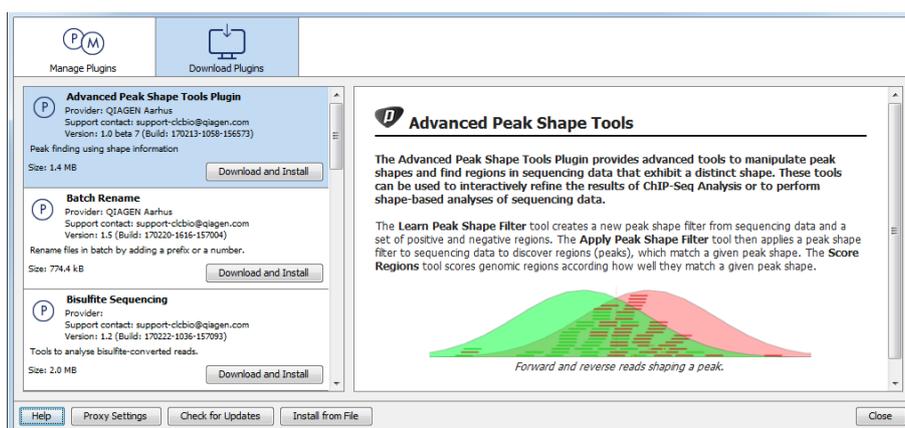

Figure 2.1: *The plugins that are available for download.*

Select Batch Rename to display additional information about the plugin on the right side of the

dialog. Click **Download and Install** to add the plugin functionalities to your workbench.

Accepting the license agreement

Part of the installation involves checking and accepting the end user license agreement (EULA) as seen in figure 2.2.
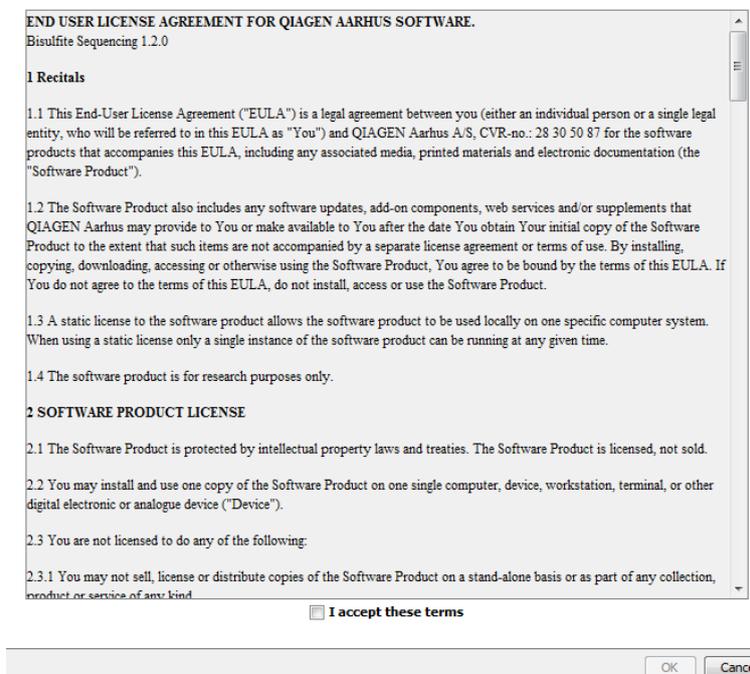

Figure 2.2: *Read the license agreement carefully.*

Please read the EULA text carefully before clicking in the box next to the text **I accept these terms** to accept. If requested, fill in your personal information before clicking **Finish**.

If Batch Rename is not shown on the server but you have the installer file on your computer (for example if you have downloaded it from our website), you can install the plugin by clicking the **Install from File** button at the bottom of the dialog and specifying the plugin *.cpa file saved on your computer.

When you close the dialog, you will be asked whether you wish to restart the workbench. The plugin will not be ready for use until you have restarted.

2.2 Uninstall

Plugins are uninstalled using the plugin manager:

Help in the Menu Bar | **Plugins... (⊞)** or **Plugins (⊞) in the Toolbar**

This will open the dialog shown in figure 2.3.

The installed plugins are shown in the **Manage plugins** tab of the plugin manager. To uninstall, select Batch Rename and click **Uninstall**.

If you do not wish to completely uninstall the plugin, but you do not want it to be used next time you start the Workbench, click the **Disable** button.
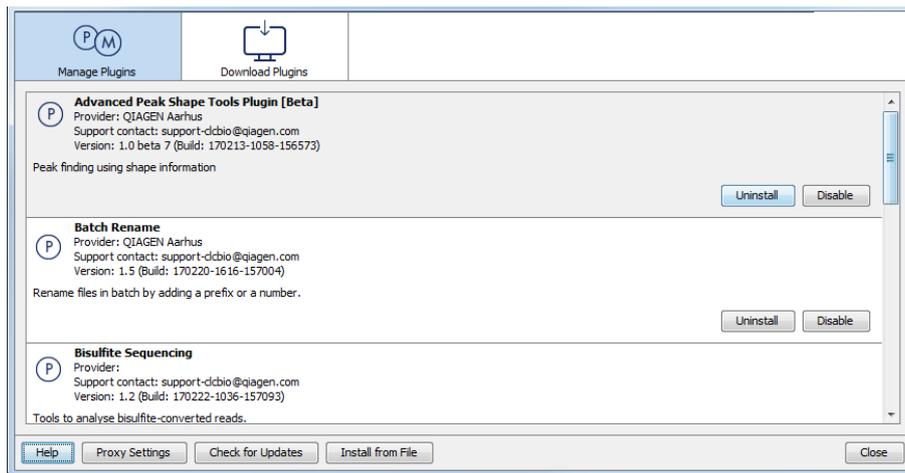
Figure 2.3: *The plugin manager with plugins installed.*

When you close the dialog, you will be asked whether you wish to restart the workbench. The plugin will not be uninstalled until the workbench is restarted.