

Database Tools plugin

PLUGINS
VERSION 7.6



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NOTES

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- The SPAdes genome assembler version 3.7.1 (<http://bioinf.spbau.ru/spades>).

Chapter 1

Starting and setting up BioNumerics

1.1 Startup program

When BioNumerics is launched from the Windows start panel or when the BioNumerics shortcut () on your computer's desktop is double-clicked, the **Startup program** is run. This program shows the *BioNumerics Startup* window (see Figure 1.1).

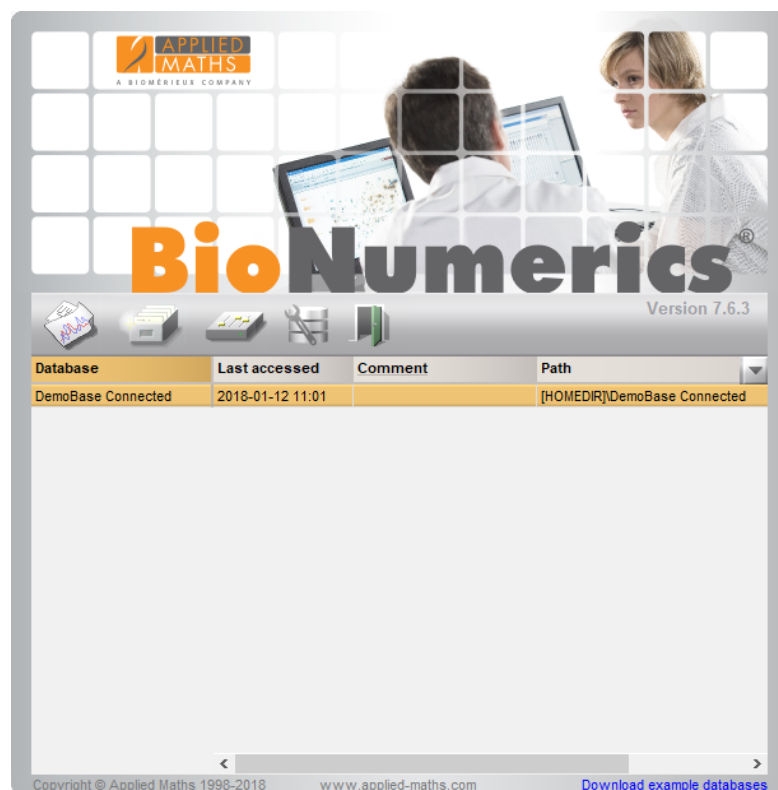


Figure 1.1: The *BioNumerics Startup* window.

A new BioNumerics database is created from the Startup program by pressing the  button.

An existing database is opened in BioNumerics with  or by simply double-clicking on a database name in the list.

1.2 Installing the Database Tools plugin

If a database is opened for the first time, the *Plugins* dialog box will appear by default (see Figure 1.2).

If the database has already been opened previously, the *Plugins* dialog box can be called from the *Main* window by selecting **File > Install / remove plugins...** (🔧).

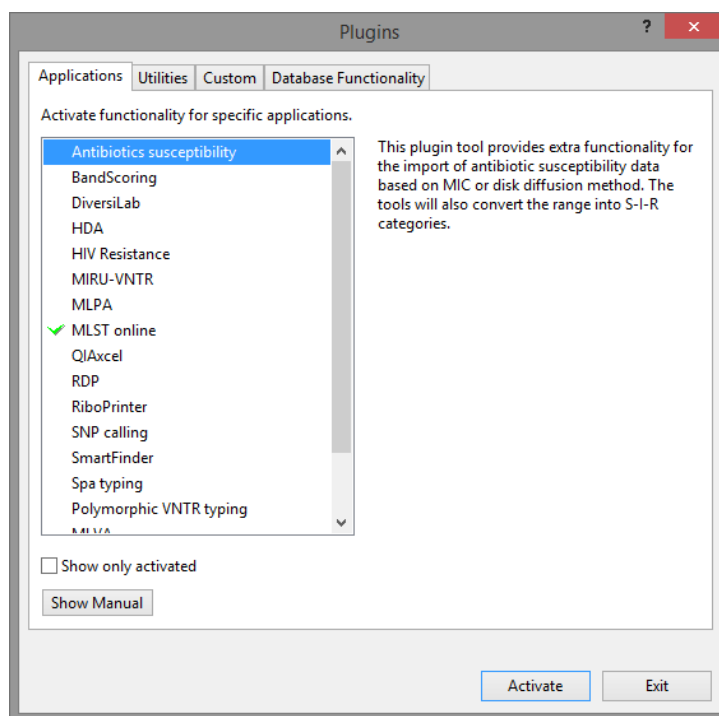


Figure 1.2: The *Plugins* dialog box.

When a particular plugin is selected from the list of plugins, a short description appears in the right panel.

A selected plugin can be installed with the **<Activate>** button. The software will ask for confirmation before installation. Some plugins depend on functionality offered by specific BioNumerics modules. If a required module is missing, the plugin cannot be installed and an error message will be generated.

Once a plugin is installed, it is marked with a green V-sign. It can be removed again with the **<Deactivate>** button.

If the selected plugin is documented, pressing **<Show Manual>** will open its manual in the *Help* window.

- 2.1 To install the *Database tools plugin* in your database, select the *Utilities tab* and select the *Database tools plugin* from the list of plugins.
- 2.2 Press the **<Activate>** button, confirm the installation of the plugin and close the *Plugins* dialog box.
- 2.3 Close and reopen the database to activate the features of the *Database tools plugin*.

The *Database tools plugin* installs menu items in the *Main* window under the **Edit** and in the *Fingerprint type* window under **File**.

Chapter 2

Database tools functionality

2.1 Find and replace

The **Find and replace tool** extends the software's database field search to include a replacement function. The search can be restricted to a selected field and/or to selected entries.

- 1.1 To launch the tool, select **Database > Entries > Find and replace...** in the *Main* window. This action will open the *Find and replace* dialog box (see Figure 2.1).

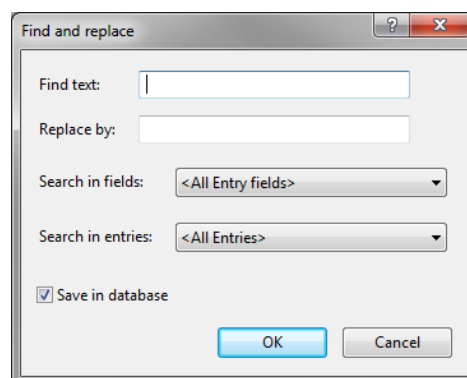


Figure 2.1: The *Find and replace* dialog box.

The text you want to search for needs to be specified in the **Find text** input box.

The string you want to replace the first string by should be entered in the **Replace by** input box.

Optionally the search can be restricted to certain fields (**Search in fields**) and certain sets of entries (**Search in entries**).

By default, all changes are saved to the database. Uncheck **Save in database** to store the changes only temporarily.



Make sure the search string is specific enough to avoid unanticipated replacements.

2.2 Clone experiment type

With the **Clone experiment type tool** an existing experiment type can be duplicated, complete with general and comparison settings. For Fingerprint types in particular, this tool can be convenient. For example, in case multiple restriction enzymes are used in combination with the same reference pattern, one fingerprint

type can be cloned to obtain a second without having to re-enter the reference positions and other settings. The tool also works for Character types, Spectrum types, Sequence types and Sequence read set types and Trend data types.

2.1 Open the experiment type you wish to clone by double-clicking on its name in the *Experiment types* panel.

2.2 The *Clone experiment type* dialog box is called with **File > Clone** (see Figure 2.2).

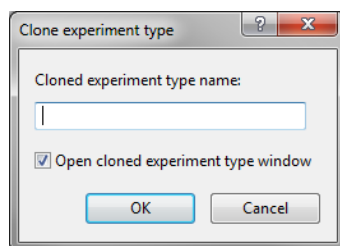


Figure 2.2: The *Clone experiment type* dialog box.

The dialog asks to enter a name for the cloned experiment type.

When pressing the **<OK>** button, the experiment type is duplicated, complete with general and comparison settings.

2.3 Copy fingerprint type settings

With the **Copy fingerprint type settings tool** fingerprint type settings can be copied from one fingerprint type experiment to another.

3.1 Open the *Fingerprint type* window by double-clicking on its name in the *Experiment types* panel.

3.2 The *Copy settings* dialog box is called with **File > Copy settings** (see Figure 2.3).

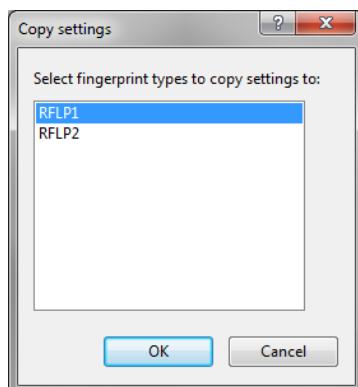


Figure 2.3: The *Copy settings* dialog box.

The dialog asks to select the fingerprint type experiment(s) where the settings will be copied to.

2.4 Link to parent

When working in a leveled database, the dependency between entries and their parent entry determine the hierarchic structure of the database (see the Reference manual, Chapter Database entries). A parent entry can be specified for a selection of entries by selecting ***Database > Entries > Link to parent...***. This action calls the *Select entry* dialog box.



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