PROTEXPRESS

User's Guide

NATIONAL® CANCER INSTITUTE

Center for Bioinformatics

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About This Guide

This section introduces you to the *protExpress User's Guide*. It includes the following topics:

Purpose

This guide provides an overview of protExpress. It explains how to use ...

Audience

Typical User

This guide is designed for ... who want to ...

Prerequisites

To get the most out of this guide, you should be familiar with the following topics:

- <topic>
- <topic>
- <topic>

This documentation is not intended for ...

Topics Covered

If you have worked with previous versions of protExpress, see *Additional References* on page 2.

If you are new to protExpress, read this brief overview, which explains what you will find in each chapter and appendix.

- <Chapter Number & Name> introduces ...
- <Chapter Number & Name> describes ...
- <Chapter 3> ...
- <Appendix Number & Name> provides general information about ...
- <Appendix Number & Name> is a glossary of terms related to protExpress.

Additional References

For more information about protExpress, see the following references:

- <Reference>
- <Reference>

Text Conventions Used

This section explains conventions used in this guide. The various typefaces represent interface components, keyboard shortcuts, toolbar buttons, dialog box options, and text that you type.

Convention	***Description***	***Example***
Bold	Highlights names of option buttons, check boxes, drop-down menus, menu commands, command buttons, or icons.	Click **Search**.
URL	Indicates a Web address.	http://domain.com
text in SMALL CAPS	Indicates a keyboard shortcut.	Press ENTER.
text in SMALL CAPS + text in SMALL CAPS	Indicates keys that are pressed simultaneously.	Press SHIFT + CTRL.
Italics	Highlights references to other documents, sections, figures, and tables.	See *Figure 4.5*.
Italic boldface monospace type	Represents text that you type.	In the **New Subset** text box, enter ***Proprietary Proteins.***
Note:	Highlights information of particular importance	**Note:** This concept is used throughout the document.
{ }	Surrounds replaceable items.	Replace {last name, first name} with the Principal Investigator's name.

Credits and Resources

The following people contributed to the development of this document.

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CHAPTER

3

USING PROTEXPRESS

This section includes the following topics:

Using the Dashboard

Managing Protocols

Searching for a Protocol

Adding a Protocol

Editing a Protocol

Deleting a Protocol

Managing Experiments

Searching for an Experiment

Adding an Experiment

Adding an Experiment Run

Adding a Protocol Application

Editing an Experiment

Deleting an Experiment

Importing and Exporting Data

APPENDIX 4

PROTEXPRESS GLOSSARY

This glossary defines acronyms, abbreviations, and terminology used in protExpress.

Term	*Definition*
CPAS (Computational Proteomics Analysis System)	A web-based system built on the LabKey Server for managing, analyzing, and sharing high volumes of tandem mass spectrometry data. CPAS employs open-source tools provided by the Trans Proteomic Pipeline, developed by the Institute for Systems Biology.
Data	A Data object refers to a measurement value or control value, or a set of such values. Data objects can be references to data stored in files or in database tables, or they can be complete in themselves. Data objects can be copied and reused a limitless number of times. Data objects are often generated by instruments or computers, which may make it important to keep track of machine models and software versions in the applications that create Data objects.
Experiment	A grouping of experiment runs for the purpose of comparison or export. Currently an experiment run belongs to one and only one experiment, which must live in the same folder in CPAS.
Experiment Run	A series of experimental steps performed on specific inputs, producing specific outputs
Material	A Material object refers to some biological sample or processed derivative of a sample. Examples of Material objects include blood, tissue, protein solutions, dyed protein solutions, and the content of wells on a plate. Materials have a finite amount and usually a finite life span, which often makes it important to track measurement amounts and storage conditions for these objects.

Table 4.1 Glossary of Terms Used in protExpress

Term	Definition
protExpress	A proteomics experiment and protocol data management tool that you can use to search and administer proteomics experiment and protocol data through online forms
Proteomics	Large-scale study of proteins, particularly their structures and functions
Protocol	A description of how an experimental step is performed. A Protocol object describes an operation that takes as input some Material and/or Data objects, and produces as output some Material and/or Data objects.
Protocol Application	The application of a protocol to some specific set of inputs, producing some outputs. A protocol application is like an instance of the protocol. A protocol application belongs to an experiment run, whereas protocol objects themselves are often shared across runs. When the same protocol is applied to multiple inputs in parallel, the experiment run will contain multiple protocol applications object for that protocol object. Protocol applications have associated parameter values for the parameters declared by the protocol.
XAR File	A compressed, single-file package of experimental data and descriptions. A XAR file expands into a single root folder with any combination of subfolders containing experimental data and settings files. At the root of a XAR file is a xar.xml file that serves as a manifest for the contents of the XAR as well as a structured description of the experiment that produced the data.

Table 4.1 Glossary of Terms Used in protExpress

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