

# 1. Benchling basics

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This document will explain the basic usage of [Benchling](#)

## Benchling Navigation

Benchling is organized through a Navigation Bar located on the left side of the screen. Hover over each icon to display its name and click into it to open its contents.

- The Benchling logo (medusa) icon will open the Home panel, where you can find your most recent files that you've opened. You can expand this section to access different views of your projects, including daily, 2-week and monthly calendar views ([Video](#))
- The briefcase icon takes you to the Projects panel, where you can create new folders, entries, and protocols, or access your notebook and sequence files. In order to **navigate backwards** in Projects (e.g. return to the top level Projects Folder from a project that you've navigated to), simply follow the breadcrumbs trail through the Project / Folder titles. ([Video](#))
- The magnifying glass icon will navigate you to the "Search" feature on Benchling that allows you to comb through your data on Benchling. ([Video](#))
- The plus (+) icon allows you to globally create any Benchling file type including: projects, notebook entries, protocols, sequences (DNA and protein), oligos, CRISPR guide RNAs, and more. ([Video](#))
- The folder icon takes you to the External Data section. You can connect Box, Dropbox, OneDrive or Google Drive accounts to Benchling. ([Video](#))
- At the bottom-left of your screen, you will see a circular icon with your initials (or a preview of an image). Navigate to this menu for additional features such as "Templates" and "Organizations" but most importantly for "Settings". You can change your name, your primary/recovery email, institution, and designate a lab. You can also upload a profile picture to use. ([Video](#))

## Benchling Workspace

Next to the navigation column, Benchling displays a Workspace for different file type(s) that you create or work on. To add a new file just click on the plus (+) icon and select the type of file to create. We'll go over a quick tour of the interface for the most commonly used file types.

### 1. Entries and Protocols

*Notebook entries* are used free-form to plan experiments and record data. Each entry has a formatting toolbar above the entry and you can create a read-only share link to share your entry. If you hover over the icons in local toolbar to the right of the screen, you can access the "History" and "Information" features for this file.

*Protocols* utilize a standard template for writing up experimental protocols that can then be added into a Notebook entry. They are similar to entries but are more rigid and structured. Some key differences are the formatting toolbar has different functionalities. ([Video](#))

### 2. DNA / Protein Sequences and Oligos

*DNA sequences* can be created free-hand or imported using external databases. Each DNA sequence will be displayed on the working area and has various sub-tabs changing your view of the sequence or displaying other information (sequence map, lineal map....). On the right of the screen, you can access the work space toolbar with the following features:

- Annotations
- Digests
- Primers
- History
- Alignments
- CRISPR
- Information

**DNA seq subtabs and tool bar**

The screenshot shows the Benchling interface with the 'SEQUENCE MAP' sub-tab selected. The 'Tool bar' on the right side contains icons for creating, analyzing, copying, and creating PDFs, as well as a search icon and a help icon. The DNA sequence map displays various features like T5 promoter, lac operator, MCS, and lambda t0 terminator. The 'Tool bar' is circled in red, and the 'SEQUENCE MAP' sub-tab is also circled in red.

*Protein sequences* can also be created free-hand or imported using external databases . Each protein sequence has sub-tabs that analyze biochemical properties or display specific information.

*Oligos* are stored single-stranded DNA sequences that are typically used as primers that bind other complementary DNA sequences. Each oligo will display general primer properties and include all hyperlinks to any DNA sequences that it has been attached to on Benchling. For oligos, you can only access the "Information" icon.

([Video](#)).

## Working Tips

### 1. Discover powerful sub-menus and learn convenient shortcut keys

Depending on where your cursor is positioned and the file that you're working on, you will find using "right-clicks" on Benchling will bring up important sub-menus. Try this on files, sequences, projects...

Combining this with existing [keyboard shortcuts on Benchling](#) will save you time and transform your Benchling experience. ([Video](#))

### 2. Customize your views and workspace when appropriate

You can declutter your Projects panel view by hiding specific Projects you don't use often. If you want to remove a Project, Folder, or file made by mistake, you can also archive them so they do not show up. Use the **Split Workspace** button to view multiple sub-tabs on your screen at the same time. When **Split Workspace** is enabled, you can drag and drop sub-tabs to each half to customize which sub-tabs are open to view. ([Video](#))

### 3. Use the Benchling Help Center to search for quick answers

At the bottom-right of your screen, click on the blue "?" button that will direct you to the Benchling Help Center. You can find easy and quick tutorials on specific biology concepts or find answers to general questions about your Benchling account. ([Video](#))