**README**

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**Purpose of this program**

This program allows collection of information about gene editing operations and activities performed on transfected cells. It allows tracking of what is done and when to individual cell samples over time.

**Instructions for using Transfection Tracker**

**Transfection Tracker\_v2.0520.xlsm**

Overview:

* This program was created in Microsoft Excel for Microsoft 365 MSO (16.0.13127.21490) 32-bit.
* The program is composed of interrelated worksheets. Worksheets include **Calendar**, **Metadata Template**, **Cell Samples**, **Activity List**, **Data Validation Criteria**, and **Documentation**.
* **Bold** lettering indicates the name of a worksheet. ***Bold Italics*** indicates an input available on a worksheet. *Italics* indicates a choice of input. Underline indicates examples of free text.
* Refer to the **Documentation** worksheet within the program for additional specific information.

1. On opening the program, Enable Editing, Enable Content, Update Connections (don’t worry about a failure here). If you intend to add data, answer NO if you see a question to open in ReadOnly mode.
2. The **Calendar** worksheet allows entry of activities performed on each sample for any date.
3. From the **Calendar** worksheet, use drop-down features to select ***Cell Sample Name*** and ***Activity*** from drop-down lists.
   1. ***Activity*** *Transfect*initiates creation of a new transfection **Metadata Template** worksheet. User can choose a previous template to modify. The date is automatically entered on the Template, a transfection designator (cell A44 on the worksheet) is assigned by concatenating data entered about the transfection, and the worksheet is automatically renamed with the transfection designator. A folder named with the transfection designator can also be automatically created within the operating system.\*\*
   2. When a clone is identified, choose the button to the right of the date to **Designate New Clone**. A drop-down menu appears from which a selection from cell sample names can be made, followed by a free text window to assign a Clone ID, which is generally a position on a multi-well plate. The Clone ID will be appended to the cell sample name and the new name will be added to the **Cell Sample** worksheet and appear in the drop-down list. A new subfolder designated with the clone ID can be created in the folder created for the transfection designator.\*\*
4. Use columns labeled ***#***and ***Plate*** to type in # of wells and total wells in cell culture plate for the resulting Activity. Exceptions to this:
   * + 1. # of 10cm plates
       2. # of vialsfor freezing
       3. # of flasks of size (T125)
5. Select ***Activity*** *Discontinue* when no versions of that clone are being carried further because of loss of fluorescence or other reason. Add reason to the ***Notes*** column as free text.
6. The ***Activity*** *Thaw* applies only to cells from a bank previously subjected to ***Activity*** *Freeze*. If you take a sample from the bank, indicate ***Activity*** *Thaw*. This might be followed by ***Activity*** *ExtractDNA*.
   1. A *Thaw* event increments passage number.
7. ***Activity*** *Sort*will append the **Cell Samples** worksheet with a new cell sample name to indicate sort number (\_S#). This new name will appear in the ***Cell Sample Name*** drop-down list on the **Calendar**. This action can also initiate the creation of a new folder with the appended name in the appropriate Transfection folder.\*\*
   1. Details of ***Activity*** *Sort*can be captured as free text in adjacent ***Notes*** column.
   2. Performing an ***Activity*** *Sort*increments passage number.
8. Other worksheets:
   1. Existing cell sample names are listed in worksheet **Cell Samples**. All activities are listed in worksheet **Activity List**.
   2. Tabulated data are in worksheet **Data**.
   3. Reports are generated in **…Report** worksheets.
   4. An example Transfection Metadata worksheet that was created for a specific transfection.
   5. \*\*The **Documentation** worksheet contains information that directs the automatic creation of folders and files with human readable names on a network drive.
9. **Do NOT:**
   1. …Type in a cell line or activity into a cell on the **Calendar**. Choose only options in the drop-down lists. If additions to the drop-down lists are needed, add them in the **Data Validation** worksheet.
   2. …Insert a line, column or cell into the **Calendar**.