

P.E.T. v2.0

Website User/Admin Guide



Updated April 26, 2015

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*Super Admin Only

Contact Support

Email: ulmpet@gmail.com

Requirements

You must have one of the following to access the <PhageEnzymeTool_URL> website.

- Google Chrome-version 27 or higher (recommended)
 - Mozilla Firefox-version 22 or higher
- Microsoft Internet Explorer- version 10 or higher
 - Apple Safari-version 6 or higher
 - Opera-version 12 or higher

Website performance will vary with the speed of your Internet connection.

Overview

This website focused on improving on an existing P.E.T. tool maintained by Paul D. Wiedemeier. You can read more about the research and contributors of the original in the link found below.

[A web-based restriction endonuclease tool for mycobacteriophage cluster prediction.](#)

Contributors to the this <PhageEnzymeTool_URL> website are as follows:

Samuel Butler
Michael Bruscato
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Accessing the Website

Website URL

Enter www.websitename.com/



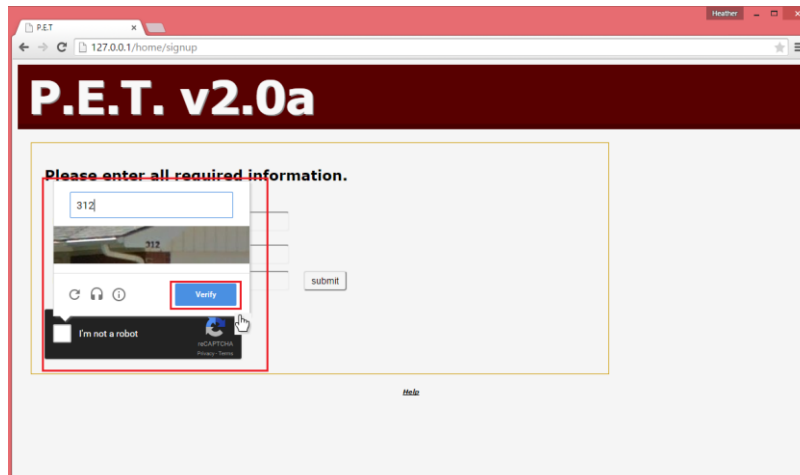
Create User Account

1. Click **Sign up for an account** at the bottom of the login page

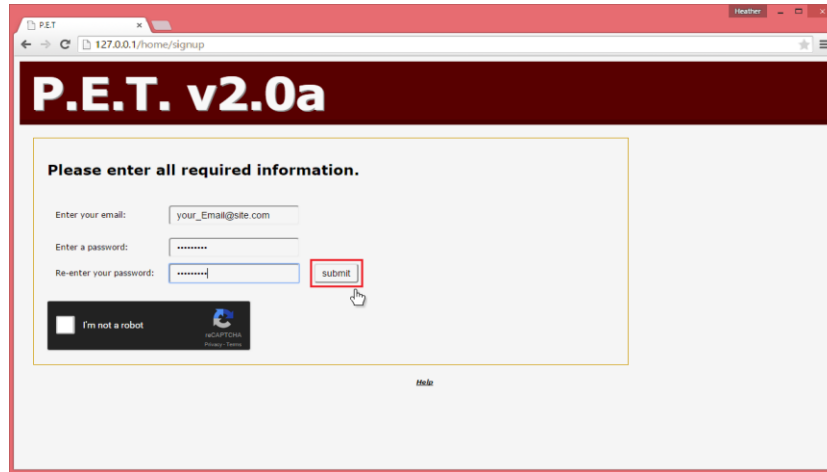


2. **Captcha**

To make sure you are a human, we will need to confirm using a captcha system. Check the ***“I’m not a robot”*** box. Then type in the characters seen in the image, and submit using the **Verify** button.



3. Enter all of the information required on the Sign Up form and press **Submit**



The screenshot shows a web browser window with the address bar displaying '127.0.0.1/home/signup'. The page has a dark red header with the text 'P.E.T. v2.0a'. Below the header, a white box contains the text 'Please enter all required information.' followed by three input fields: 'Enter your email:' with the placeholder 'your_email@site.com', 'Enter a password:' with a masked password, and 'Re-enter your password:' with a masked password. A red box highlights the 'submit' button. Below the input fields is a CAPTCHA area with the text 'I'm not a robot' and a circular logo. The word 'title' is visible at the bottom of the white box.

Login

To login to your Phage Enzyme Tool account:

1. Enter your email address.
2. Enter your password.
3. Press **Log in**.



The screenshot shows a web browser window with the address bar displaying '127.0.0.1/home'. The page has a dark red header with the text 'P.E.T. v2.0a'. Below the header, a white box contains the text 'Please enter your username and password.' followed by two input fields: 'Email Address:' with the placeholder 'your_email@site.com' and 'Password:' with a masked password. A red box highlights the 'login' button. Below the input fields are two links: 'Click here to sign up for an account!' and 'Click here to reactivate account!'. The word 'title' is visible at the bottom of the white box.

Log Out

There are two ways to log out:

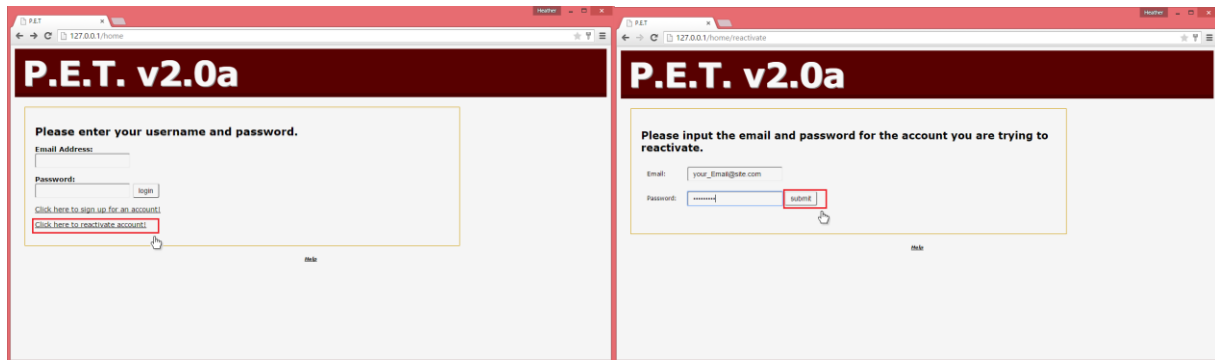
- Click **Log out** found at the bottom of the left-hand menu.
- OR-
- Close the browser

Forgot Password

Contact your super admin.

Reactivate Account

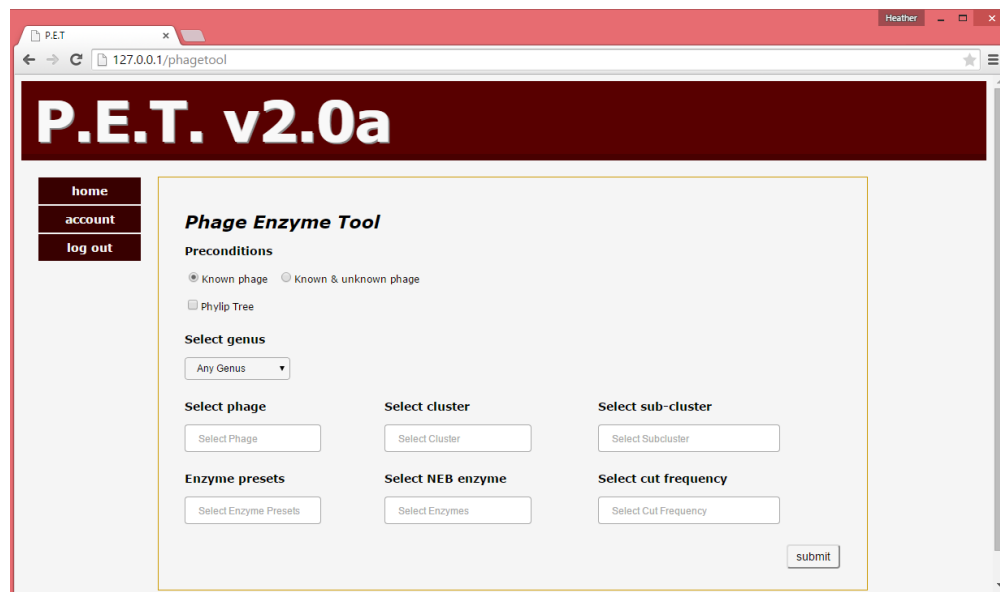
If you have previously deactivated an account, go to **Reactivate account** at the login page to do so.



The image shows two side-by-side browser windows of the P.E.T. v2.0a application. The left window is the login page, titled 'Please enter your username and password.' It has fields for 'Email Address:' and 'Password:', a 'login' button, and two links: 'Click here to sign up for an account' and 'Click here to reactivate account'. The 'Click here to reactivate account' link is highlighted with a red box. The right window is the reactivation page, titled 'Please input the email and password for the account you are trying to reactivate.' It has fields for 'Email:' (with 'your_email@ade.com' entered) and 'Password:', and a 'submit' button. The 'submit' button is highlighted with a red box.

Enter your previous account email and password and click **submit**.

Website Home



The image shows the P.E.T. v2.0a website home page. The browser window title is 'P.E.T.' and the address bar shows '127.0.0.1/phagetool'. The page has a dark red header with 'P.E.T. v2.0a' in white. On the left is a sidebar with three buttons: 'home', 'account', and 'log out'. The main content area is titled 'Phage Enzyme Tool' and contains several sections: 'Preconditions' with radio buttons for 'Known phage' (selected) and 'Known & unknown phage', and a checkbox for 'Phylip Tree'; 'Select genus' with a dropdown menu set to 'Any Genus'; 'Select phage' with a 'Select Phage' button; 'Select cluster' with a 'Select Cluster' button; 'Select sub-cluster' with a 'Select Subcluster' button; 'Enzyme presets' with a 'Select Enzyme Presets' button; 'Select NEB enzyme' with a 'Select Enzymes' button; and 'Select cut frequency' with a 'Select Cut Frequency' button. A 'submit' button is located at the bottom right of the main content area.

Phage Enzyme Tool

1. Preconditions

Select radio button **Known phage** if you would like to search the database for information about a known phage and its enzyme interactions.

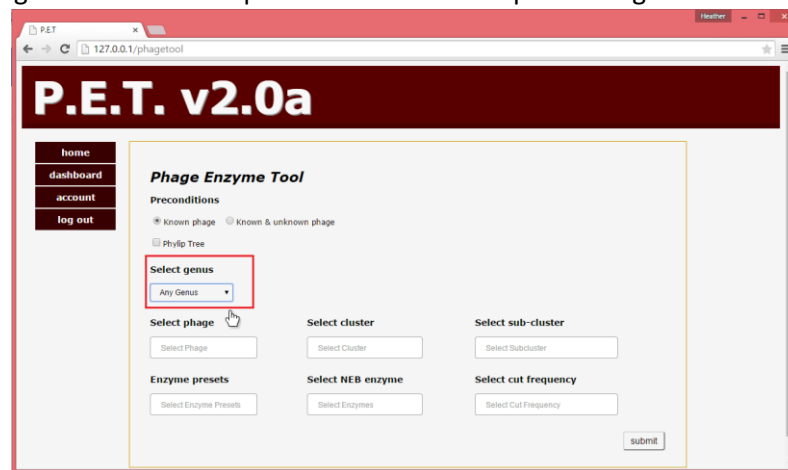
Select radio button **Known & unknown phage** if you would like to search the database for information about known phage and their enzyme interactions and have the phage tool calculate a similarity score (or sim score) based on cut count comparisons.

2. Phylip Tree

Select the **Phylip Tree** option if you would like to have a phylip tree generated from the comparisons of the cuts of the selected phage.

3. Select Genus

Select a genus from the drop down menu where up-to-date genus names can be found:



4. Select Phage

Select one, many, or all phages from the **Select phage** list which will become visible after clicking inside of the **Select phage** text box.

Phages may be unselected by clicking the **x** to the left of the selected phage's name box.

5. Select Cluster

Select one, many, or all cluster options from the **Select cluster** list which will become visible after clicking inside of the **Select cluster** text box.

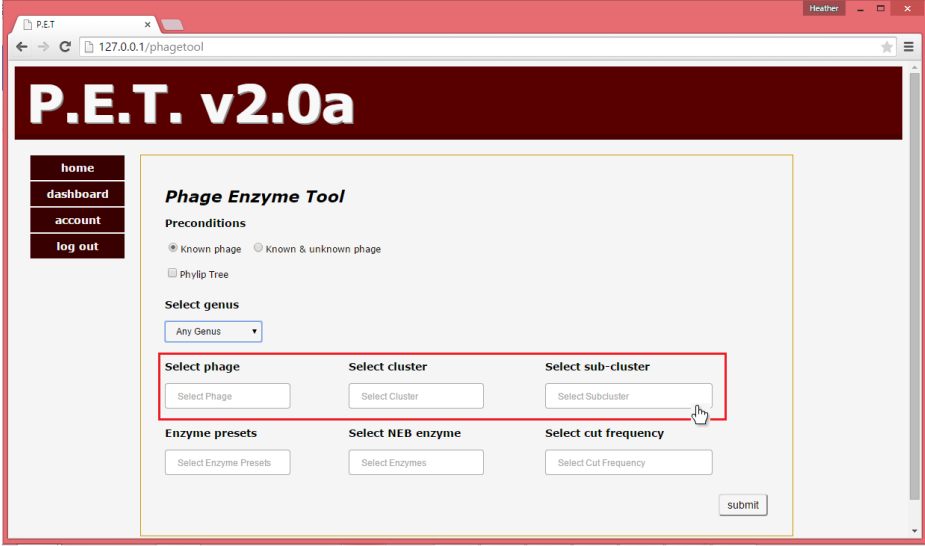
Clusters may be unselected by clicking the **x** to the left of the selected cluster's name box.

6. Select Sub-cluster

Select one, many, or all Sub-cluster options from the **Select cluster** list which will become visible after clicking inside of the **Select cluster** text box.

Sub-clusters may be unselected by clicking the **x** to the left of the selected cluster's name box.

INSTRUCTIONS 3-6



7. Select NEB Enzyme

Select one, many, or all NEB enzyme options from the **Select NEB enzyme** list which will become visible after clicking inside of the **Select cluster** text box.

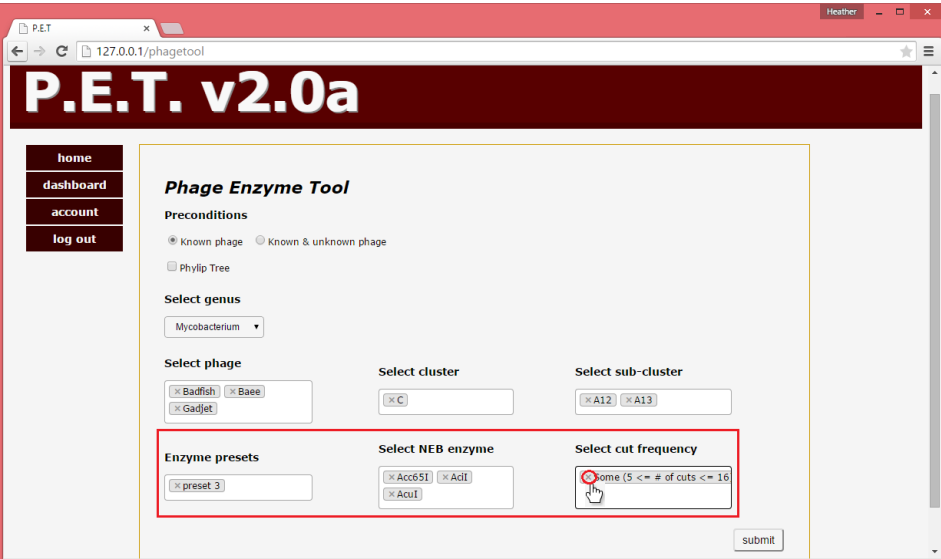
NEB enzymes may be unselected by clicking the **x** to the left of the selected enzyme's name box.

8. Select Cut Frequency

Select one, many, or all of the cut frequency options from the **Select cut frequency** list which will become visible after clicking inside of the **Select cluster** text box.

Cut frequencies may be unselected by clicking the **x** to the left of the selected frequency name box.

INSTRUCTIONS 7-8



Once you are satisfied with all of your selections, click the **Submit** button to obtain results. The load time of your results may vary.

Viewing Results

Your results will be in a table format. Each row in the table holds the information from one phage and its cut data. The column names indicate what data is being shown or which enzyme created the number of shown cuts.

If you have selected the unknown and **known** information, the **unknown** phage data will always be the first row in the chart and its cuts will be shown as selected ranges. There will also be a similarity score associated with each phage row comparing the percentage of enzymes that cut in the same range as the unknown phage the user entered.

The table is sortable by any column. You can click on any column's header to sort by that criteria alphanumerically.

Enzyme presets: Select NEB enzyme: Select cut frequency:

Show 10 entries Search:

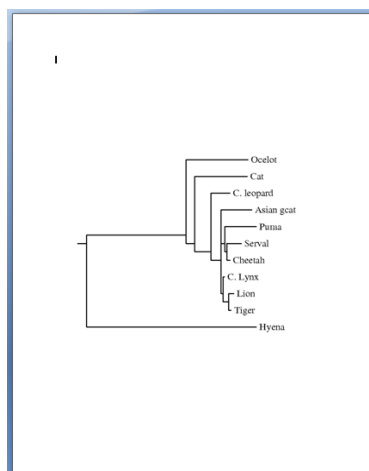
Phage Name	Genus	Cluster	Subcluster	Acc651	AcuI
Aidzy	Mycobacterium	A	2	12	No Data
AgentM	Mycobacterium	A	5	16	No Data
Airmid	Mycobacterium	A	5	11	No Data
Alma	Mycobacterium	A	9	9	No Data
AnnaL29	Mycobacterium	A	2	9	No Data
Anubis	Mycobacterium	A	3	15	No Data
Aragog	Mycobacterium	A	5	15	No Data
Archetta	Mycobacterium	A	5	12	No Data
Artemis2UCLA	Mycobacterium	A	6	10	No Data
Bachome	Mycobacterium	A	11	13	No Data

Showing 1 to 10 of 112 entries Previous 1 2 3 4 5 ... 12 Next

You can also choose the number of entries shown at a time, as well as search for specific phages.

Your **Phylip tree** results will be output to a pdf file. This tree is generated by the PHYLIP executables who's documentation can be found at <http://evolution.genetics.washington.edu/phylip.html> . The pdf is generated by ghostScript. An open source PostScript to PDF converter for linux. You can read more about it at <http://ghostscript.com/doc/current/Ps2pdf.htm>.

Example of a Phylip Tree layout:



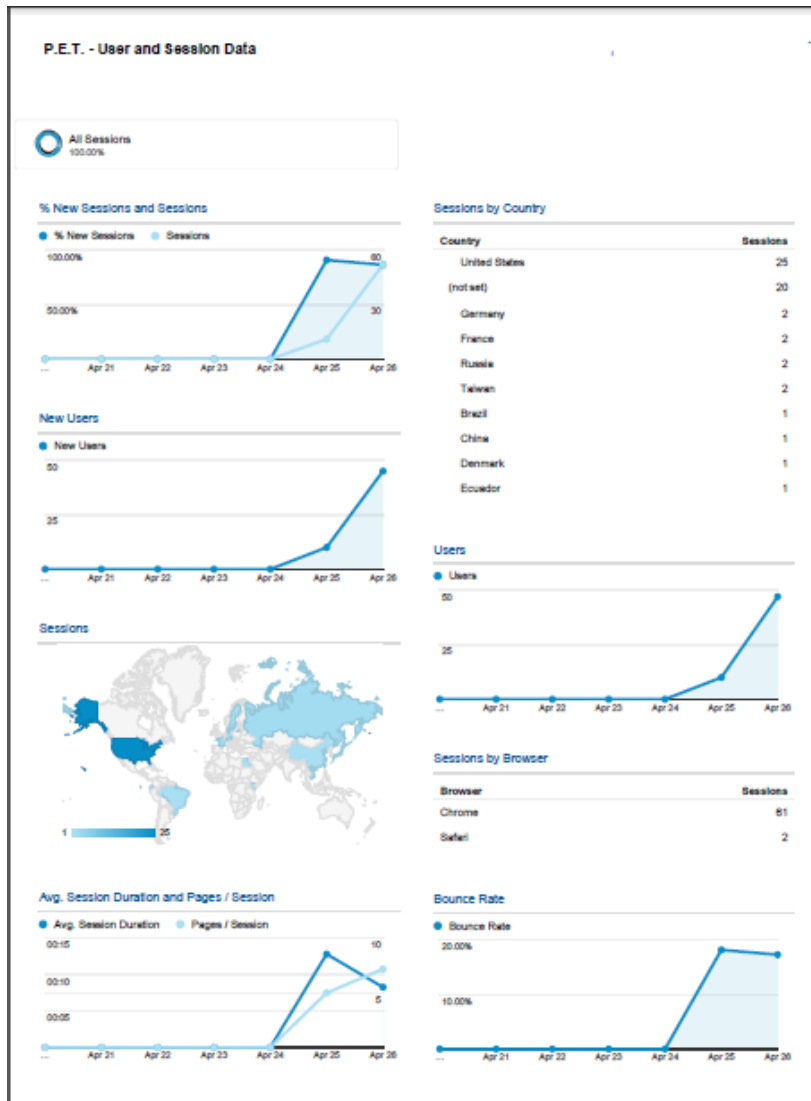
Administrative Dashboard

The Dashboard is available and viewable by administrative users only.

Demographics

The first tab on the Dashboard, **Demographics**, contains a hyperlink to the Google Analytics dashboard for the ulmpet Google account. Where demographic information on the P.E.T. users can be found.

Ex. of Results



Upload to Update

An administrator can update the tool with the latest and most up-to-date data on phage-enzyme findings.

To use the uploader you must first select the type of file you wish to upload.

The **nebCutter** file type must have the correct phage that corresponds with the file selected. This can be accomplished by either selecting the phage from the pre-populated list, or you may type in the name of the phage and it will search for it in the list. This makes the selection process much quicker.

The short **CSV** files require that you select the corresponding Genus that you will be loading. These selections are few and should be quickly found.

The last file type is uploaded by selecting the **FASTA** file that you wish to upload to the database. This process is simply browsing for the file, selecting, and sending it. Once the file is sent, the database will handle the file appropriately and you will be taken back to a fresh page in the dashboard.

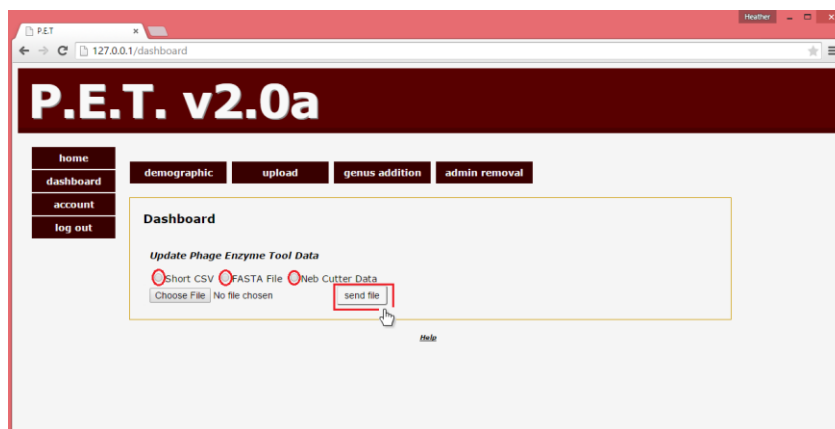
“Where do I get the files to upload?”

Fasta Files can be found on phagesDB.org and associated websites.

Short CSV Files are also found on phagesDB.org and associated websites.

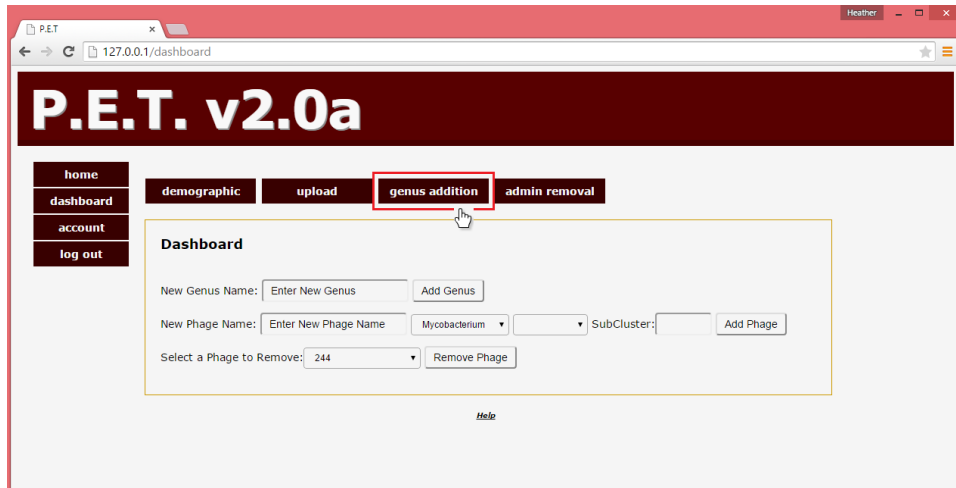
From the Navigation bar click *Data->Download Data* and select an option under **“Simple (just phage names and clusters) Tab-Delimited Text Files”**

Neb Cutter Data Files are obtained from uploading a *FASTA* file to the nebcutter website. (<http://nc2.neb.com/NEBcutter2/>). After cutting your phage with the tool click **“save all sights”** in the leftmost menu at the bottom of the page. This will download a .txt file upload to PET2.



Genus/Phage Addition or Removal

To add a new genus name, click the text box in the Dashboard **Genus Addition** tab, type in new genus name and click the **add genus** button to send it in.

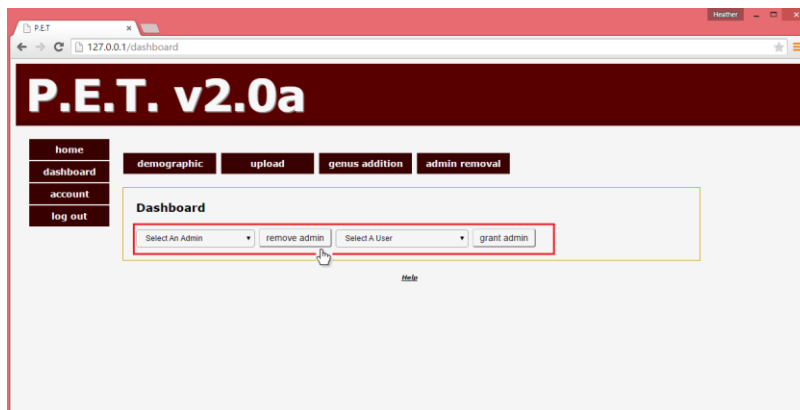


The screenshot shows the P.E.T. v2.0a web application interface. The browser address bar displays '127.0.0.1/dashboard'. The application has a dark red header with the title 'P.E.T. v2.0a'. On the left, there is a sidebar with links: 'home', 'dashboard', 'account', and 'log out'. The main navigation bar includes tabs: 'demographic', 'upload', 'genus addition', and 'admin removal'. The 'genus addition' tab is selected and highlighted with a red box. Below the tabs, the 'Dashboard' section contains three forms: 'New Genus Name' with an input field 'Enter New Genus' and an 'Add Genus' button; 'New Phage Name' with an input field 'Enter New Phage Name', a dropdown menu showing 'Mycobacterium', a 'SubCluster' input field, and an 'Add Phage' button; and 'Select a Phage to Remove' with a dropdown menu showing '244' and a 'Remove Phage' button. A 'Help' link is located at the bottom center of the dashboard area.

This same step can be repeated for addition or removal of phages.

*Grant/Removal of Administrative Privileges

To grant or remove administrative privilege from any administrator, find their name in the drop down menu of a list of users located under the **Dashboard → admin removal** tab, and click the **remove admin** or **grant admin** button to finalize your decision.



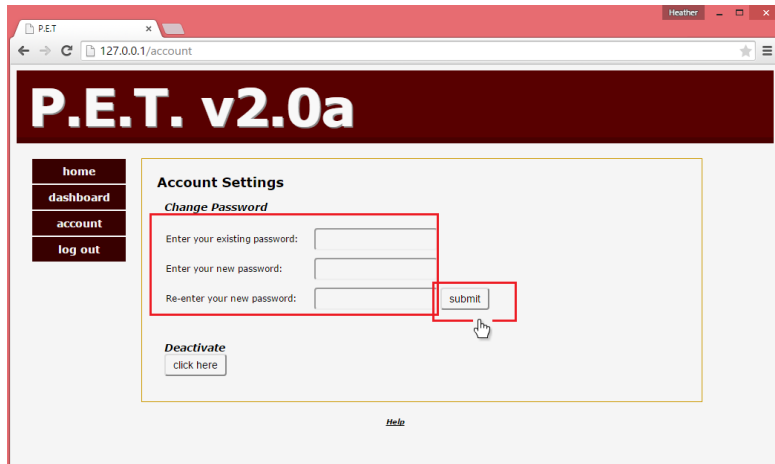
The screenshot shows the P.E.T. v2.0a web application interface with the 'admin removal' tab selected. The browser address bar displays '127.0.0.1/dashboard'. The application has a dark red header with the title 'P.E.T. v2.0a'. On the left, there is a sidebar with links: 'home', 'dashboard', 'account', and 'log out'. The main navigation bar includes tabs: 'demographic', 'upload', 'genus addition', and 'admin removal'. The 'admin removal' tab is selected and highlighted with a red box. Below the tabs, the 'Dashboard' section contains two dropdown menus: 'Select An Admin' and 'Select A User'. Below these dropdowns are two buttons: 'remove admin' and 'grant admin'. A red box highlights the 'remove admin' and 'grant admin' buttons. A 'Help' link is located at the bottom center of the dashboard area.

Account Settings

Account settings are found on the page linked to the **Account** menu button.

Change Password

To change your password, go to the menu and select **Account**.



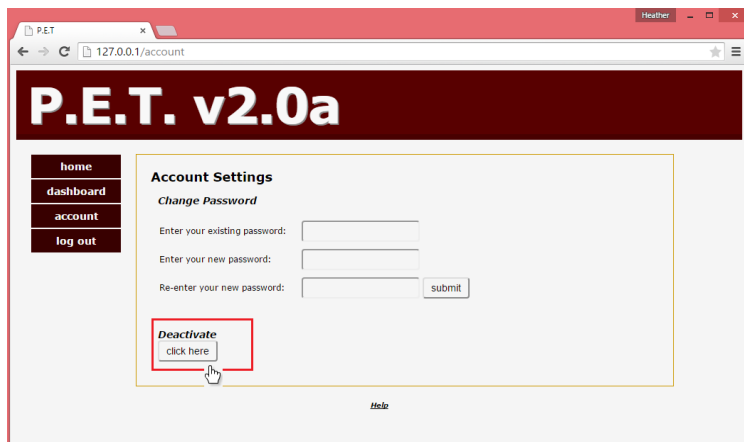
The screenshot shows a web browser window with the address bar displaying "127.0.0.1/account". The page title is "P.E.T. v2.0a". On the left, there is a navigation menu with buttons for "home", "dashboard", "account", and "log out". The main content area is titled "Account Settings" and contains a "Change Password" section. This section has three text input fields labeled "Enter your existing password:", "Enter your new password:", and "Re-enter your new password:". A "submit" button is located to the right of the third field. Below the "Change Password" section, there is a "Deactivate" section with a button labeled "click here". A red box highlights the "Change Password" section, and a yellow box highlights the "Deactivate" section. A mouse cursor is pointing at the "submit" button.

Here you will enter your current password, the new password you wish to change it to, and the new password once again for confirmation. Once you have filled in all three text boxes click the **submit** button to make the change final.

When logging in the next time, remember to enter this new password.

Deactivate Account

To deactivate your existing account, go to the menu and select **Account**.



The screenshot shows the same web browser window as the previous one, but with a red box highlighting the "Deactivate" section, which contains a button labeled "click here". A mouse cursor is pointing at this button. The "Change Password" section is still visible but not highlighted.

At the bottom of the account setting page you will see the words “**Deactivate account**”, and a **click here** button following. Once you click, your account will be deactivated.

If you wish to reactivate your account, see the **Reactivate account** option at the login page of the website.

*The super admin cannot remove his/her self