Site Search

***Note:** This exercise uses **PlasmoDB.org** as an example database, but the same functionality is available on all VEuPathDB resources.*

What is the VEuPathDB Site Search?

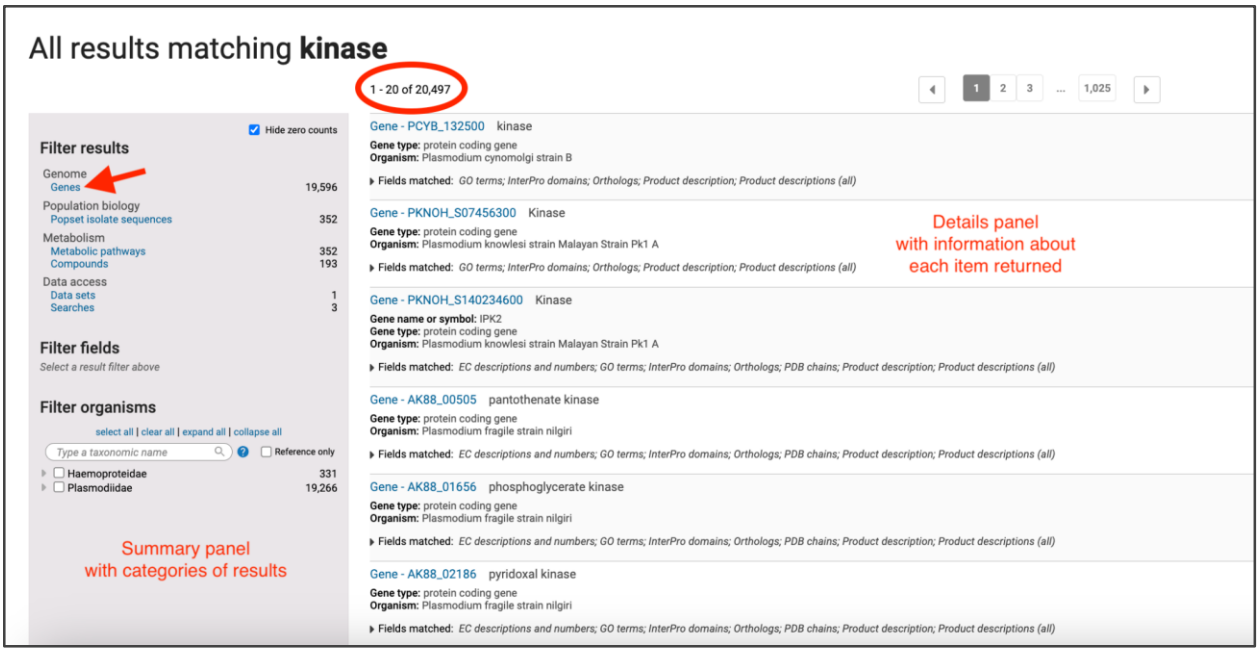
- The site search queries the database for your search term (keyword or identifier) and returns a list of pages and documents that contain your query term
- The site search is a convenient starting point for mining the vast amount of data available in VEuPathDB and identifying and filtering information relevant to you
- The site search box is located in the header of every VEuPathDB site and is available on every page

Learning objectives:

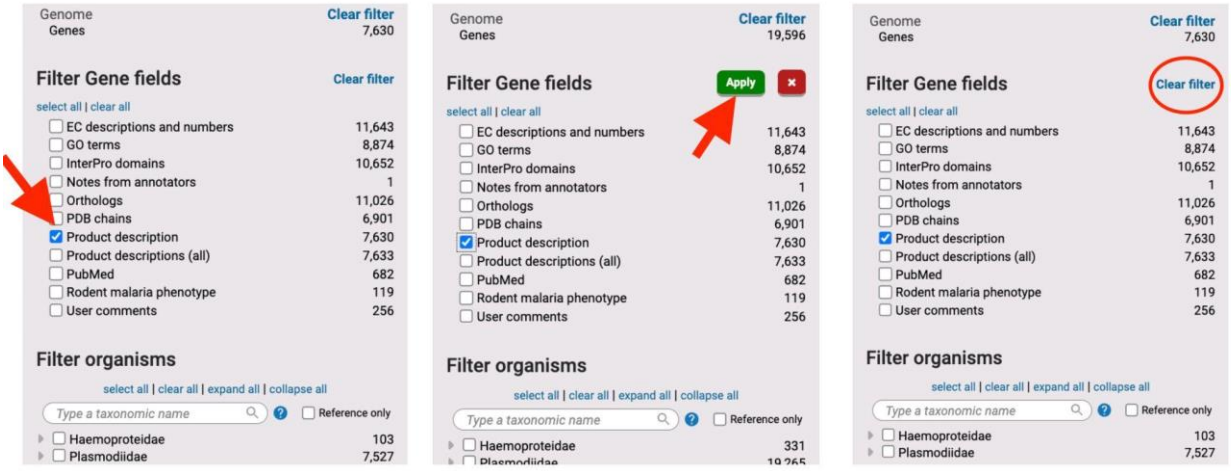
- Search by keywords or identifiers
- Filter site search results by categories and fields
- Export results to a search strategy
- Find a specific gene using the gene ID in site search
- Navigate to and from the site search result
- Explore searches using wildcards (*)

1. **Go to PlasmoDB.org and search for a keyword**. Enter the word *kinase* in the site search window (red arrow in the image below) at the top of the home page. Then click <enter> on your keyboard or click on the search icon (red circle in the image below).

2. **Site Search result format**: The site search returns a categorized list of pages and documents that contain your search term. Site search results are presented with a **summary panel on the left** and a **details panel on the right**. Clicking on a particular result type on the left will populate the details panel with that result.
    a. What is the total number of results with the word kinase?
    b. Are all the results genes? (Red circle in image below)

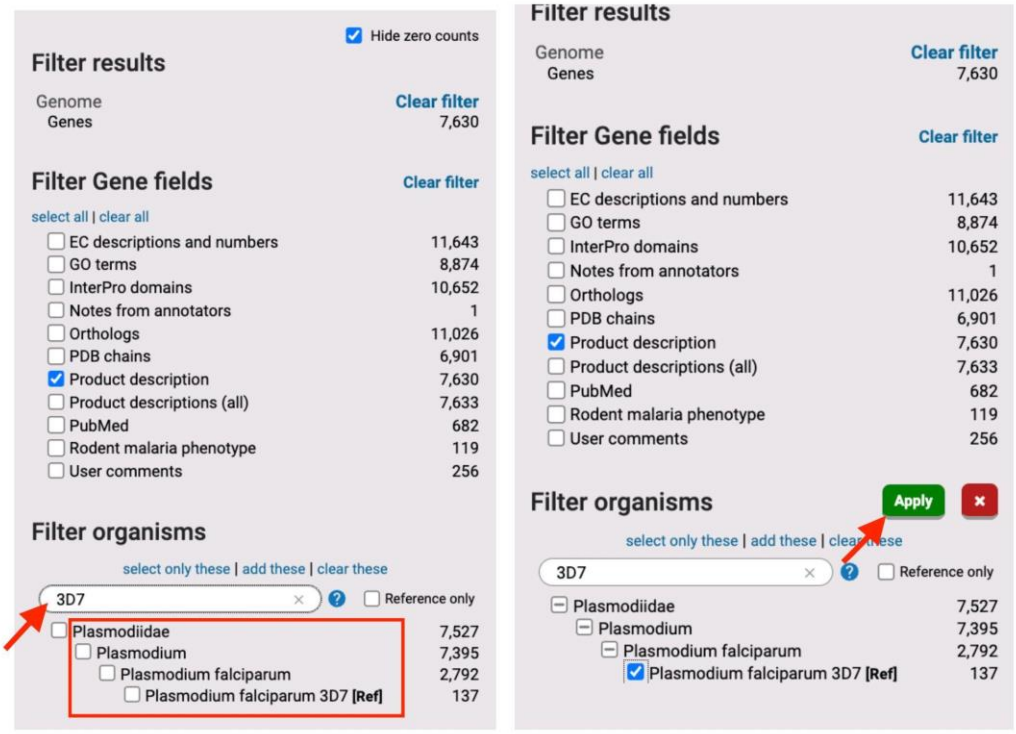


3. **Filter the site search result by category:** Click on "genes" (red arrow in image above) to view only results from that category. Notice that the **Filter Fields** section expands to reveal additional filtering options (categories).
    a. How many of the genes included the word kinase in their product descriptions? To find out, select the "Product description" field (red arrow, left panel in image below) and choose Apply (red arrow, middle panel in image below)
    b. Select the *Product descriptions* field and choose *Apply*. Once a filter is applied it can be removed by clicking on *Clear filter* (red circle, right panel in image below).

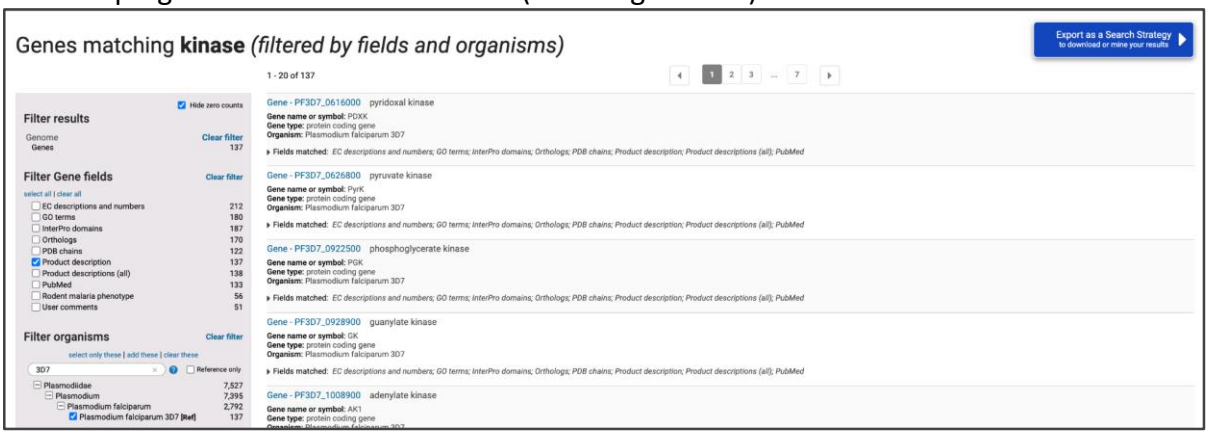


4. **Filter the site search result by organism:** How many of the above genes are found in *Plasmodium falciparum* 3D7? Explore the *Filter organisms* section of the summary results panel

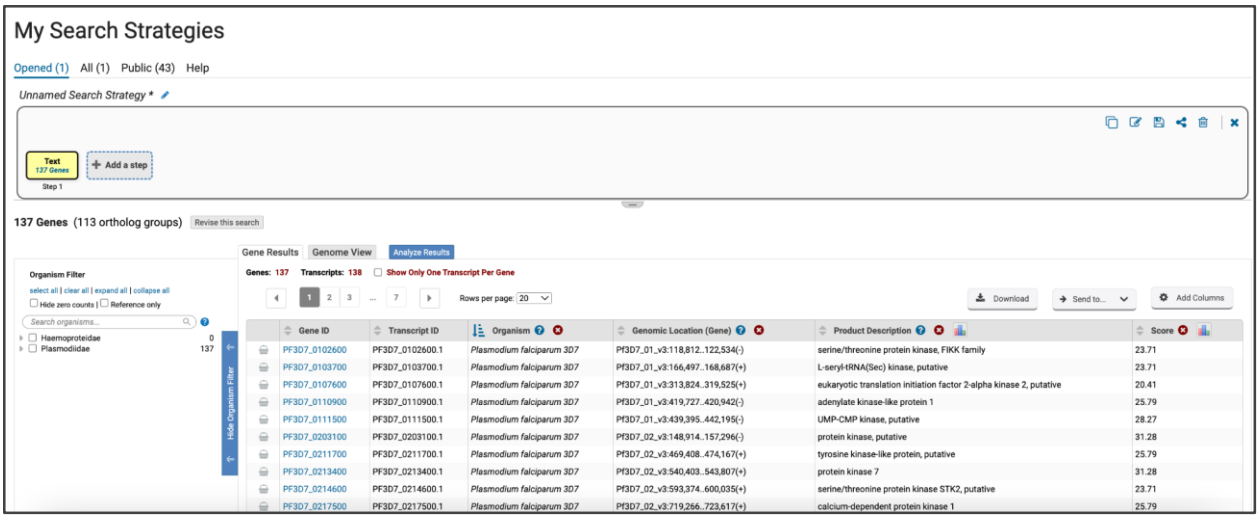
a. Start typing “3d7” in the “filter organisms” search box (red arrow in first panel below) and explore the resulting organism tree (red box in first panel below)
b. Apply the filter (red arrow in second panel below)
c. How many genes in *P. falciparum* contain “kinase” in product descriptions?



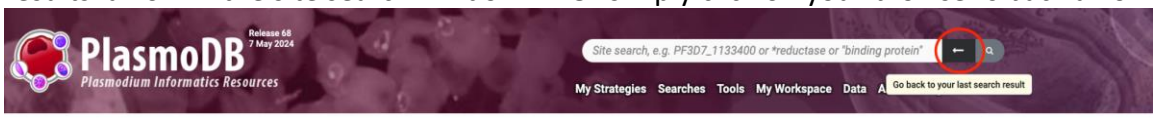
5. **Export the results to a search strategy**. Click the blue *Export as a search strategy* button at the top right-hand side of the results (see image below).



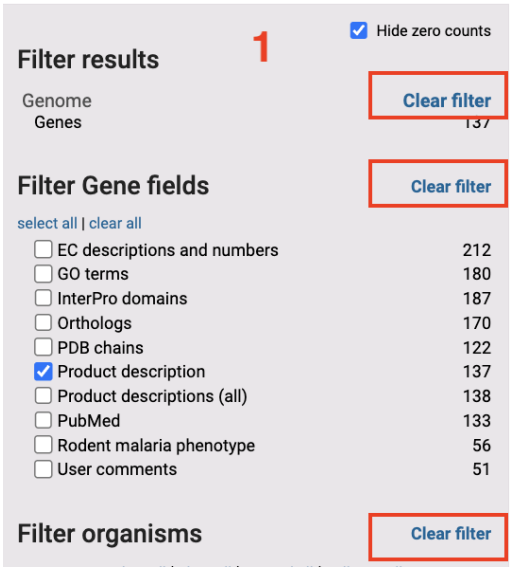
Once exported, the results open into a search strategy (image below). From here you will be able to take advantage of over 100 specialized searches using the **Add Step** button. We will learn more about this in a future exercise.



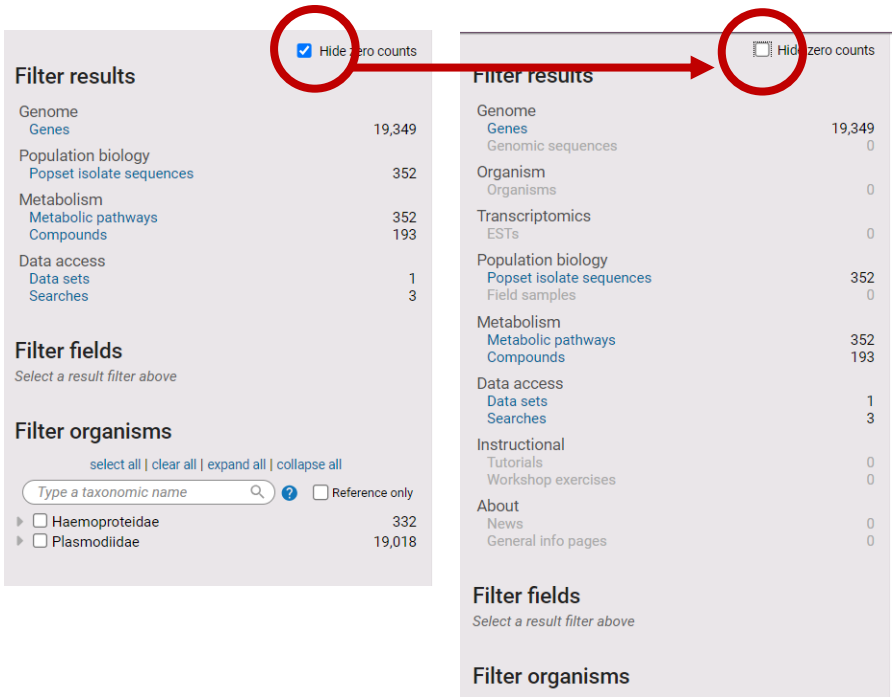
6. **Return to the site search results page**. You can achieve this in two ways: 1. Your previous results and filter settings were preserved and can be accessed by clicking on the 'back to results' arrow in the site search window. 2. Or simply click on your browser's back arrow.



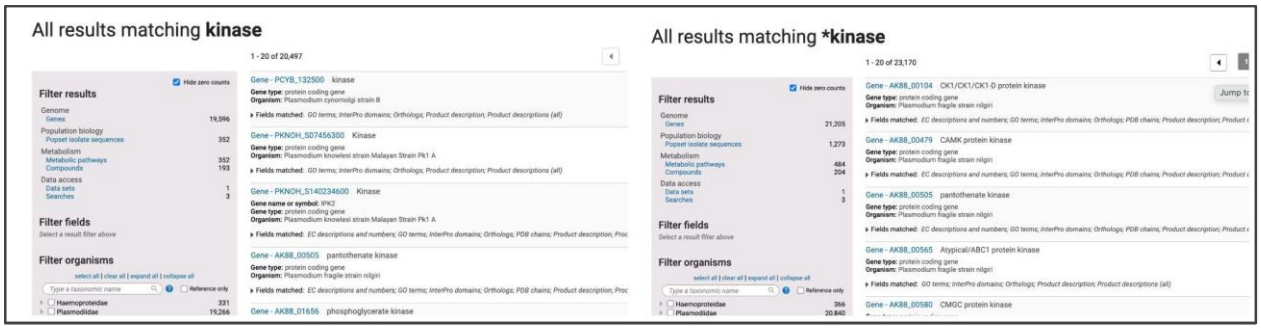
7. **Clear all filters**. You can achieve this in two ways: 1. You can click on each of the clear filter options in the filter results panel. 2. You can click on the *clear filters option* in the site search window, which serves to clear all filters.



8. Click the ***Hide zero counts*** check box in the *Filter results* panel. What does this do?



9. **Run a wildcard search**. The wildcard (denoted by an asterisk *) can be used alone to retrieve all site search results or combined with a word such as **kinase* to retrieve compound words ending with the word kinase like phosphofructokinase. As usual, results can then be explored using the filters in the *Results filter* on the left side of the website. Feel free to compare the results you get when you run a search or the word *kinase* to a search with a wild card **kinase* or **kinase**.



10. **Search for a specific gene ID**. Enter a gene ID in the site search window: *PF3D7_0310100*. When there is an exact match for an ID in the database, the site search offers a card in the

details panel to draw attention to the direct link to the gene page (red arrow in image below). Although your search for PF3D7_0310100 does return a direct link to the gene in *P. falciparum* 3D7, it also returns a link to the *P. gaboni* strain gene (red box in image below). Why?