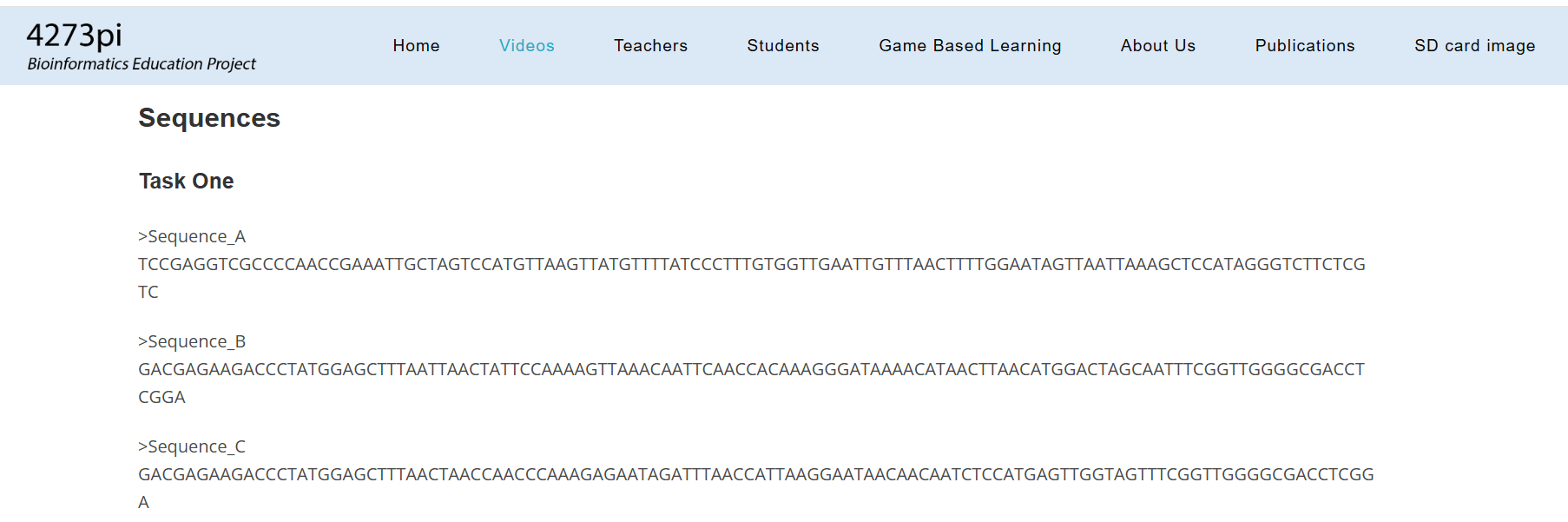
# BIOINFORMATICS: FOOD DETECTIVE INSTRUCTIONS

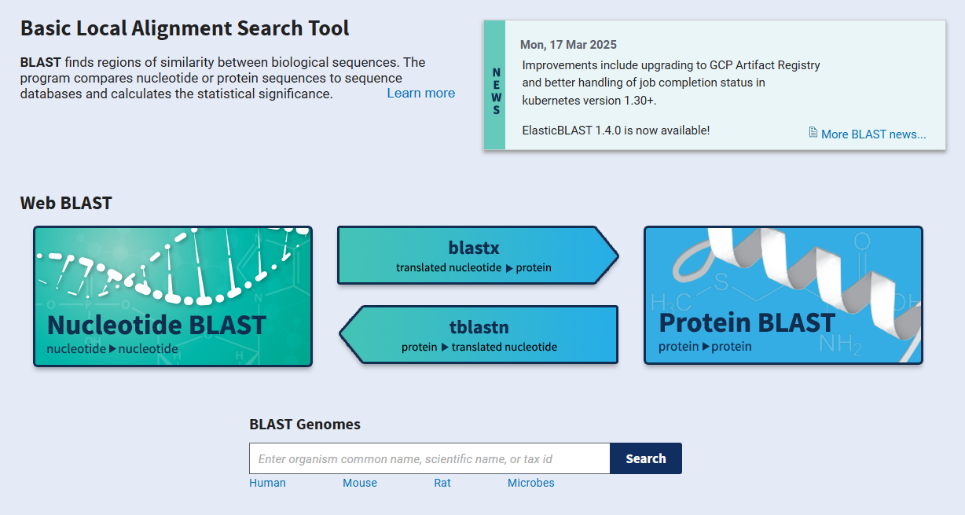
## Set-up: Sausage DNA sequences

* Open a Web browser. Type this in the address bar: **4273pi.org**
* Click on the **Students** tab.
* Under **Bioinformatics: Food Detective**, view the sequences **for the short workshop**.
* Keep this page open. We will use the DNA sequences labelled **Task One**.



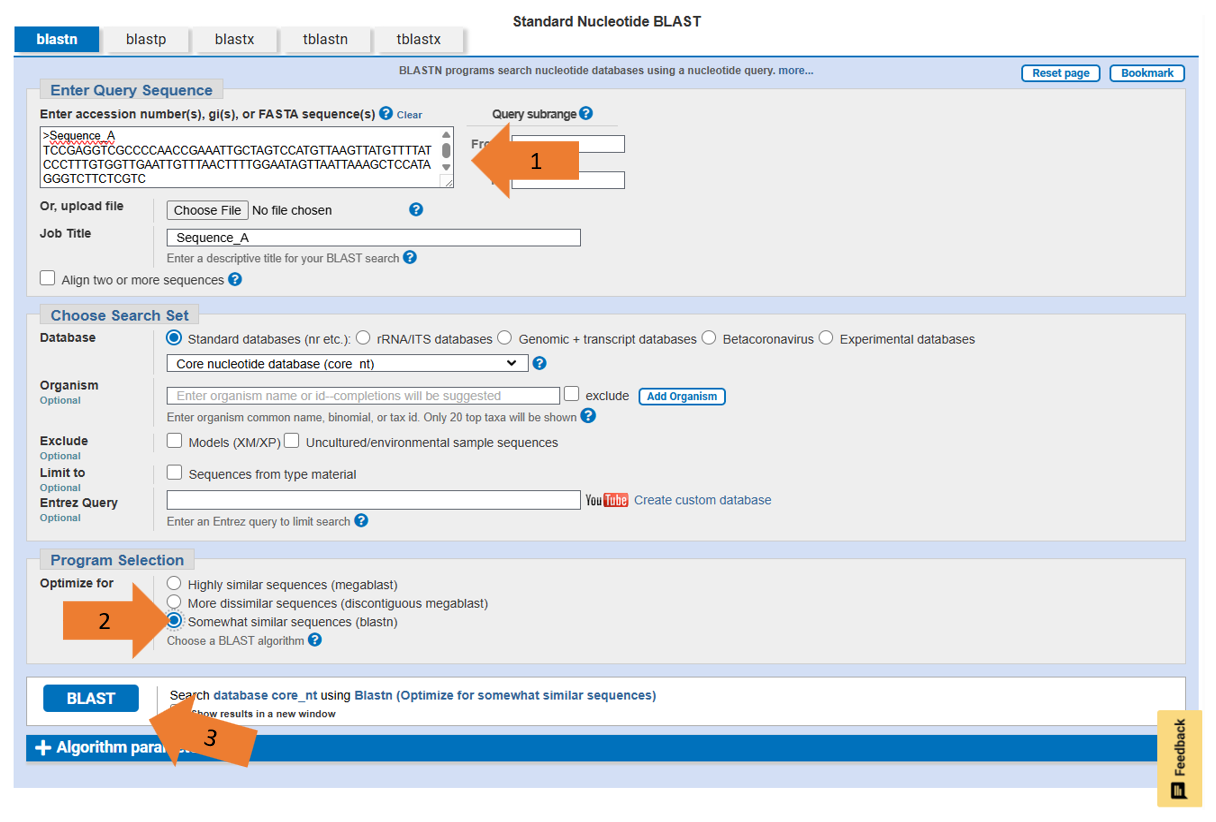
## Set-up: Searching the sequence database

* Open a new tab in your Web browser and search for **NCBI BLAST**. *This is the DNA search engine we will use.*
* Click the link **BLAST: Basic Local Alignment Search Tool**.
* Click **Nucleotide BLAST**.



Discovering the animal that DNA Sequence A comes from

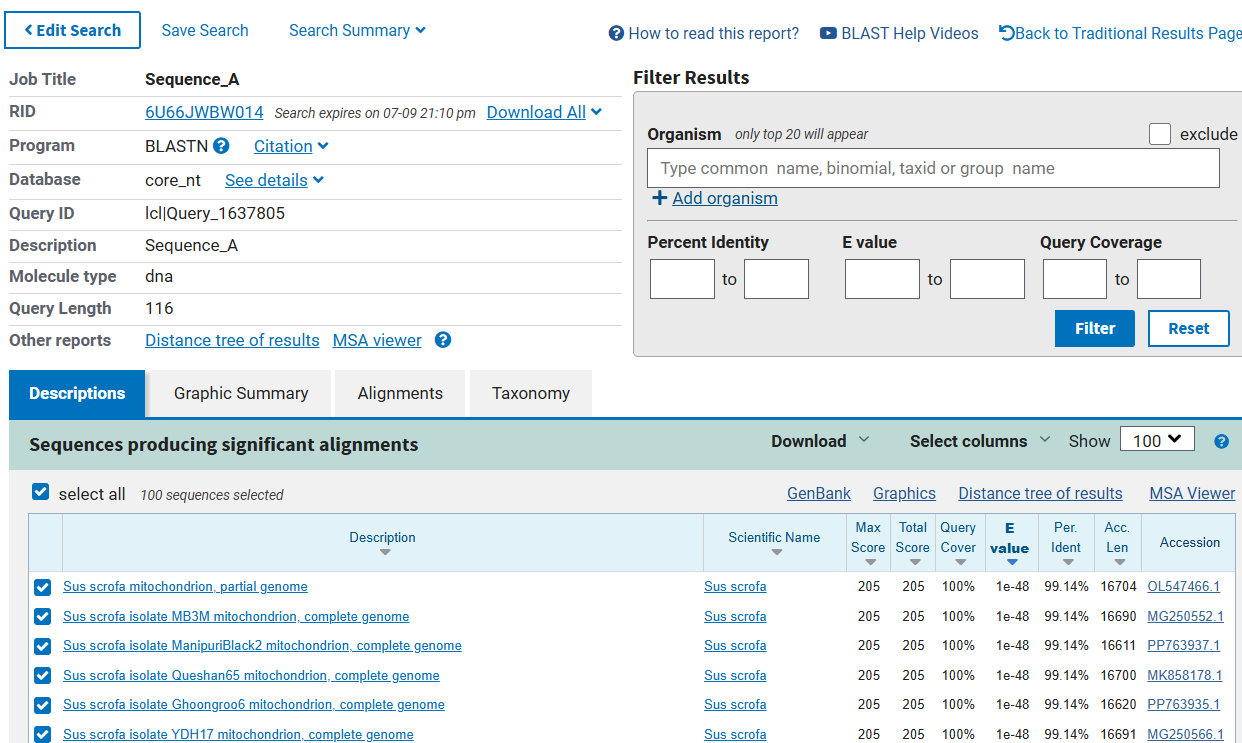
1. Paste Sequence A into the **Enter Query sequence** box at the top of the BLAST page.
2. Scroll down to **Optimize for** and choose **somewhat similar sequences**. *This causes BLAST to do a slow and careful search.*
3. Scroll to the bottom of the page and click **BLAST**.



1. Wait for results to appear.
2. Scroll down a little to see which DNA sequences are similar to Sequence A.

**Tip:** The best-matching sequence is listed first.

1. Write the animal’s **scientific name** and **common name** in your **Results** table.
2. Convert the scientific name to a common name using the **Key to scientific names**.



Example BLAST output

Now repeat the process for sequences B to H.

## If you have spare time …

Why not also take a look at some of the **Task Two** sequences: Sequence I, J, K, L or M? (*Please let us know first*.)

|  |
| --- |
| Version 2.2 (short)  Stevie A Bain, Daniel Barker, Laura CE Campbell and Richard Fitzpatrick |
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