

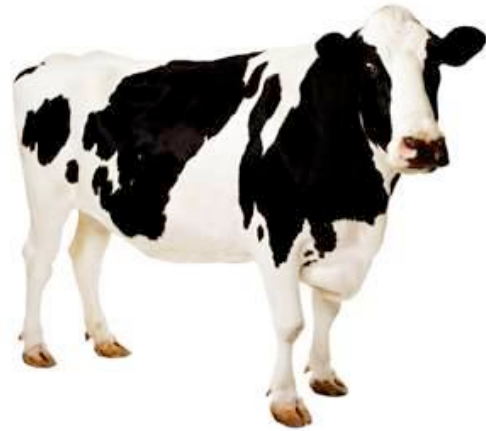
Which Organism is Most Closely Related to a Dinosaur?

Order the following organisms #1-7, with a 1 next to the organism that you think is the *most* related to a Tyrannosaurus rex and a 7 next to the one that you think is the *least* related.

Human (*Homo sapiens*) _____



Cow (*Bos taurus*) _____



Salamander (*Cynops*) _____



Mouse (*Mus musculus*) _____



Chicken (*Gallus gallus*) _____



Dog (*Canis lupus familiaris*) _____

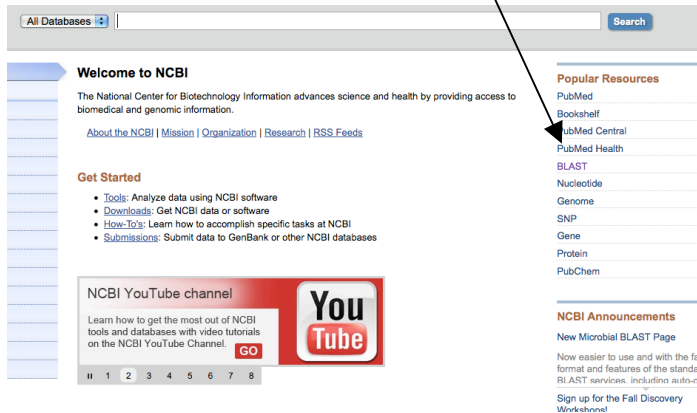


Rat (*Rattus norvegicus*) _____

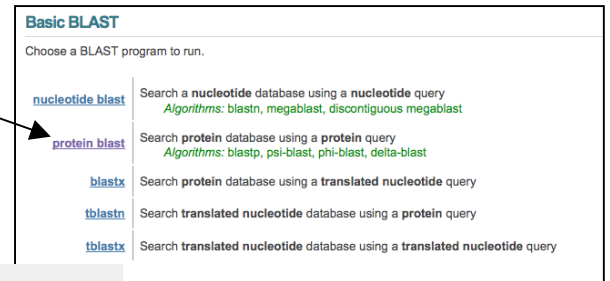


Protein BLAST Experiment Help Sheet.

1. Go to: http://www.sciencebuddies.org/science-fair-projects/project_ideas/Genom_p018.shtml
2. Scroll down to the **Procedures** section.
3. Open up another tab or window and go to this website: <http://www.ncbi.nlm.nih.gov/>
[Do NOT close either window until you are done with everything!]
4. Once on the NCBI website, click on “BLAST” in the right column.



5. Then click on “Protein BLAST”



The website will look like this:

This is where you will be entering data. You will fill this in by following all directions from the procedure portion of the Sciencebuddies website.

Make sure you click this box. If you don't, you lose EVERYTHING! ☹️

WIRED Reading Guide: How To Hatch a Dinosaur by Thomas Hayden

Can be accessed from: http://www.wired.com/magazine/2011/09/ff_chickensaurus/

1. Who is Jack Horner?
2. What are his 4 crazy ideas about dinosaurs?
3. What is the evidence he has that dinosaurs are related to birds? Did your BLAST experiment support his hypothesis?
4. What is an atavism? Give one example in humans.
5. List the 5 atavistic traits Horner is working on. On the back of this page, *draw your interpretation of what a chicken would look like with these traits turned on.*
6. After reading this article, do you think Horner *should* or *should not* 'create' a dinosaur? List two pieces of evidence from the article to support your answer.
7. The article mentions the woolly mammoth being closely related to elephants. Can you think of other modern day animals (or plants) that might be related to organisms that have gone extinct?