



Project: Research a Gene



Purpose

In this project, students will search the same online databases used by scientists to collect information about a set of genes and present them to your group. This will give you an opportunity to engage in inquiry-based learning and apply the concepts in molecular biology and genetics from this course.

Learning Objectives

1. Use online databases to look up information about a gene.
2. Present scientific research to an audience of peers.

Activity 1 - Research a Gene!

Estimated time: 45 min

Instructions

1. Before getting started on this activity, your instructor will assign your group a set of genes to research. Write the names of the genes your group is assigned in the table below.

Group Assigned Genes

| |
|--|
| |
|--|

2. In your group, assign each student one of the genes to research. Write the name of your gene in the table below.

Individual Assigned Gene

| |
|--|
| |
|--|

3. Use FlyBase to look up the information in Table 2 below.
4. Use HPA to look up the information in Table 3 below.

Table 2. FlyBase Information

| Category | Information |
|----------------------------|-------------|
| General Information | |
| Full Gene Name | |
| FlyBase ID | |
| Sequence Location | |
| Function | |
| Biological Process | |
| Cellular Component | |
| Expression Data | |
| Anatomical Expression | |
| Developmental Stage | |
| Orthologs | |
| Orthologs in other species | |
| Human Orthologs | |

Table 3. Human Protein Atlas

| Category | Information |
|--|-------------|
| Function | |
| Is the gene tissue specific? Which tissue? | |
| Where is it localized in cells? | |

Activity 2 - Present to your Group

Estimated time: 15 min

Instructions

1. Present your gene to your group.
2. Take turns presenting your genes amongst your group and decide on one gene that you think is the most interesting.

Activity 3 - Class Presentation

Estimated time: 30 mins

Instructions

1. With your group, create a short presentation about your chosen gene to the class.
2. Your presentation should have about four slides and be thorough:
 1. Slide 1: The GENE you picked to share with your group, your name and date
 2. Slide 2 - 4: Present the information you collected about the gene. For full credit, include relevant images/ diagrams on your slides.
3. One student in the group should submit your slides. Make sure you mention everyone in your group by name so they also get credit for the presentation.

Contributions and Affiliations

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