## **Discussion Board: Mutation in the News**

Part 1: Introduction & Recap Due: See Course Schedule

## **S** Activity Overview

This discussion activity helps you connect course concepts to real-world examples of genetic mutations reported in scientific news and popular media.

### Your Task

**Find a recent news article** (published within the last 2 years) that discusses a specific genetic mutation. Then:

- 1. Post the article link with a brief summary
- 2. Classify the mutation as neutral, deleterious, or advantageous
- 3. Explain your classification based on the mutation's effects
- 4. Comment on two peers' posts with constructive feedback

### Detailed Instructions

### **Step 1: Find Your Article**

Look for articles from reputable sources such as:

- Scientific American, Nature News, Science Daily
- National Geographic, New Scientist
- · University press releases
- · Medical and genetics news websites

#### Suggested Search Terms:

- "genetic mutation discovery 2024"
- "new gene variant study"
- "DNA mutation research news"
- "genetic disorder mutation finding"

#### **Step 2: Create Your Post**

Your initial post should include:

• Article Title & Source: Full citation information

• Link: Working URL to the article

• Summary: 2-3 sentence overview of the mutation discussed

• Classification: Neutral, deleterious, or advantageous

• Rationale: Explanation based on the mutation's described effects

#### Example Post Structure:

Article: "New Study Identifies Mutation Linked to Rare Genetic Disorder" - Science Daily

**Link:** [URL to article]

**Summary:** Researchers discovered a point mutation in the XYZ gene that disrupts protein function, leading to impaired cellular metabolism.

Classification: Deleterious mutation

Rationale: This mutation is deleterious because it disrupts normal protein function and is

associated with a genetic disorder that reduces fitness.

#### **Step 3: Engage with Peers**

After posting your article, respond to at least two classmates' posts with:

- Thoughtful comments on their mutation classification
- Questions about the biological mechanism
- Connections to other course concepts
- · Additional insights or related examples

# Learning Objectives

Through this activity, you will:

- · Apply mutation classification concepts to real-world examples
- Develop skills in scientific literature interpretation
- Practice communicating genetic concepts clearly
- Engage in collaborative learning with peers
- Connect classroom learning to current research

# **III** Grading Rubric

Criteria	Excellent (5 pts)	Good (4 pts)	Needs Improvement (2-3 pts)
Article Quality	Recent, reputable source with clear genetic focus	Appropriate source with some genetic relevance	Poor source choice or unclear genetic connection
Classification Accuracy	Correct classification with detailed rationale	Reasonable classification with basic rationale	Incorrect classification or weak rationale

Peer Engagement 2+ substantive comments that advance discussion

2 basic comments that acknowledge peers

Fewer than 2 comments or superficial responses

**Total: 15 points** 

# **Timeline & Deadlines**

### Activity Schedule:

• Initial Post Due: Please see LMS

• Peer Responses Due: Please see LMS

• Instructor Feedback: Within 3 days of closing

# **Tips for Success**

- Start early to find a good article and allow time for peer interaction
- Choose articles that clearly describe the mutation's effects
- Consider mutations with **clear fitness consequences** for easier classification
- Be prepared to **defend your classification** if peers question it
- Use **proper scientific terminology** in your explanations

### ? Frequently Asked Questions

#### Q: What if I can't tell if a mutation is neutral or slightly deleterious?

A: Make your best judgment based on the evidence provided and explain your reasoning. Real-world classification often involves uncertainty.

#### Q: Can I use the same article as another student?

A: Try to find unique articles, but if you choose the same one, make sure your analysis and perspective are different.

#### Q: How long should my post be?

A: Aim for 150-250 words for your initial post, and 50-100 words for each peer response.