

XIMENA BERNAL

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Professor of Biology

PUBLIC LECTURE OFFERINGS

FROM NEURONS TO EVOLUTION: HOW EAVESDROPPERS SHAPE COMMUNICATION SYSTEMS

Explore how eavesdropping, a common behavior across species and sensory modalities, influences the evolution of communication systems. Dive into the neuroethological and ecological aspects of eavesdropping, revealing how unintended listeners can drive adaptations in signaling behaviors.

TRAFFIC NOISE AND ARTIFICIAL LIGHT AT NIGHT: HUMAN IMPACT ON FROG COMMUNICATION

Human activities, like urbanization, are reshaping how animals communicate. What are frogs doing to confront this challenge? Learn about the ways frogs and their eavesdropping enemies respond to sensory pollutants such as traffic noise and artificial light at night.

POKÉBIO: FOSTERING SCIENTIFIC CURIOSITY THROUGH FICTIONAL WORLDS

Discover how the world of Pokémon can engage audiences in biological concepts. Drawing parallels between fictional creatures and real-life biology will spark your curiosity and inspire learning. Whether you're a fan of the Pokémon universe or just love the idea of combining games, science, and community-building, there will be something for everyone.

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CLASSROOM DISCUSSION TOPICS

WHAT DOES POKÉMON TEACH US ABOUT BIOLOGY? NON-TRADITIONAL APPROACHES TO TEACHING

1. Explore how Pokémon can serve as a gateway to teaching complex biological principles, such as evolution, adaptation, and ecosystems. By using relatable and engaging examples, students turned imagination into reality as they designed unique Pokémon-inspired creations and connected with their local community.

THE SCIENCE OF BEHAVIOR: INTEGRATIVE APPROACHES IN ECOLOGY

2. Behavioral ecology thrives on interdisciplinary methods to generate comprehensive explanations. By combining neurophysiology, bioacoustics, ecology, and phylogenetic approaches, a unique and valuable approach is provided for unraveling complex behavioral phenomena.

FROM CURIOSITY TO IMPACT: TRAITS OF A SUCCESSFUL SCIENTIST

3. Uncover the key traits and skills that drive success in scientific careers. Covering agency, creativity, and collaboration, learn how to navigate challenges and opportunities in academia and beyond.