NEW MEDICINES FOR THE TREATMENT OF CHRONIC PAIN

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Description:

Analgesic drugs like aspirin, ibuprofen, and Tylenol effectively treat acute pain, such as minor cuts, bruises, and headaches. But for unknown reasons, these drugs do not work as well when the pain is long-lasting, such as with arthritis or lower back pain. Why not? Our medical sciences laboratory is studying how chemical changes in the spinal cord and brain might lead to chronic pain. Our approach is to study the body's natural pain-killers, including the endorphins (thought to cause the runner's "high") and neuropeptide Y. Our laboratory is testing hypotheses that might determine just how these natural pain killers work. Our work may lead to the development of more effective drugs for the treatment of chronic pain.

Objectives:

1) Complete a pharmacology (drug research) experiment in small animals.
2) Analyze neurons in the brain or spinal cord after dissection.
3) Learn and utilize some simple molecular biological techniques.

Prerequisites:

This project is ideal for students considering a profession in the medical sciences. Requires some biological laboratory experience, such as mammalian dissection. Laboratory experience in chemistry a plus.