## Increased levels of bioactive IL-16 correlate with disease activity during relapsing experimental autoimmune encephalomyelitis (EAE)

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## 1 Abstract

SAN DIEGO - Depression is the No. 1 cause of relapses in people at risk for serious health problems, and it also happens to be the leading cause of new cancer cases. It is responsible for one in four cancer diagnoses, according to the National Cancer Institute.

Symptoms include depression, anxiety, problems sleeping, low mood, irritability, loss of interest in the things that matter, and very frequent thoughts of death. One of the most powerful drugs available to treat depression and cancer is chemotherapy, a drug called chemo-linabine.

Dr. Kevin Davis, a Board-certified rheumatologist and administrator of the San Diego County Department of Community Health, said chemotherapy has an indirect effect on people's hearts and lungs. He said more and more people are trying chemo-linabine so it has been shown to work in the laboratory, particularly on beta cells in the brain, which can affect the body's immune system. Cells are primarily responsible for rebuilding blood flow to your organs, which in turn helps with any number of health problems.

However, Davis said the ultimate effect of chemotherapy is to promote growth in beta cells, which are responsible for the body's defense mechanisms.

That's why, when Dr. Davis and his team of rheumatologists recently began treating high cholesterol patients at 705 Hancock Place, they found that a large number of these patients, it turned out, were resistant to the drug.

"The drug is not beneficial if you use it at an uncoordinated level," said Davis. "If we isolate those patients, we find that they are not using the drug well." As for those who are resistant to chemo-linabine, he says he'll use different types of drugs that work better than just chemo-linabine, including diabetic drugs, and anti-inflammatory drugs such as ibuprofen.

Davis said the most commonly used target in the laboratory is Cell Thelial Growth Factor, a protein that expands the proteins of beta cells, such as the ones that help the body fight cancer.

So if you think you have depression or an underlying heart disease that may make it hard to reach your loved ones, you're not alone.

"If you begin to see signs of depression, your doctor will suggest you see a psychotherapist to help you manage the emotions that are going through your brain, and to help you avoid difficult decision making and difficult people who may be pressuring you," said Davis.

## 1.1 Image Analysis



Figure 1: A Black And White Photo Of A Black And White Cat