Vanderbilt BioVU

BioVU is Vanderbilt’s “bank” of de-identified DNA samples. Vanderbilt scientists are using these samples to study the links between genes and disease. By learning about these links, discoveries can be turned into new medicines and treatments for diseases faster than ever. The results may improve patient care by giving doctors better information about how a certain patient’s disease may change over time or how they might respond to treatment.

GENE CHANGES LINKED TO PAIN

Painkillers are some of the most prescribed drugs in America. In 2012, doctors in the United States wrote 259 million prescriptions for painkillers - enough to give a bottle of pills to every adult in the country. Both how much and how long we feel pain differs for each person depending on several genes. In this study, researchers used BioVU to find a new gene linked to pain.

The protein made by this newly discovered gene determines how much pain relief is felt when a painkiller is taken. This study found that painkillers are less effective for people
with certain changes in this gene. They may experience pain for longer periods of time.

Researchers have found that gene changes can affect how people feel pain. The results from this BioVU study could help us find new and better ways to treat pain. Discovering links between genes and pain may lead to improved, personalized clinical care.


GENE PATTERNS PREDICT SEVERE DIABETIC EYE DISEASE

About 1 in 20 Americans has diabetes. Diabetes can lead to many complications, including problems with eyesight. Diabetic retinopathy (DR) is the most common diabetic eye disease and the leading cause of blindness in adults. A person’s genes might affect their chances of getting DR. Over time, high blood sugar can hurt blood vessels in the retina, the lining at the back of the eye. Diagnosing DR early could help treat this disease.

Using BioVU, Vanderbilt researchers found a link between DR and certain gene patterns. Patients with a specific gene pattern were more likely to get a severe form of DR than others.

This study showed that gene patterns can predict a higher risk of developing severe diabetic retinopathy (DR). This information could help doctors detect and treat DR sooner.


Learn more about ongoing BioVU research by visiting our website: http://victr.vanderbilt.edu/pub/biovu/

Feel free to contact us anytime at the BioVU hotline: (866) 436-4710