Pharmacokinetics of Naja sumatrana (Equatorial Spitting Cobra) Venom and Its Major Toxins in Experimentally Envenomed Rabbits

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1 Abstract

SAN DIEGO - A new study shows that brain and eye disease that results from mutant kidney cells in mice has an association with blood-borne susceptibility to antibody-mediated autoimmune disorders such as psoriasis, diabetes and lupus.

Previous studies have shown that diseases associated with antibody-mediated autoimmune disorders can also lead to inflammatory conditions that are characterized by inflammation associated with the disease system. The findings indicate that exposures to immune cell-associated potentially infectious agents have an association with blood-borne engebrances and disease mechanisms.

Targeting the nervous system and immune systems for inflammatory and immune-related diseases may support the developing of targeted therapeutics tailored for these diseases said Birgit Wenzel, M.D., vice president of research and clinical development at Ithaca University.

In this study, the researchers identified a single gene, VirB9-1, that is significant for the highly invasive chronic beta-thalassemia. VirB9-1 is a hallmark of type IV and non-intravenous beta-thalassemia, which are mainly diagnosed in adults with the rare blood condition.

The researchers discovered VirB9-1 in blood samples from diabetic mice, as well as from healthy control mice. The VirB9-1 gene was found in both other and normal beta-thalassemia patients. In non-diabetic diabetic mice, VirB9-1 was also found in tissues belonging to immune system cells involved in infection and inflammatory responses.

This is a positive evidence-based discovery of this gene in Type IV alpha-thalassemia and should expedite the development of therapeutic strategies that target this gene, Dr. Wenzel said.

We also demonstrated in other mouse models that VirB9-1 may affect the insulin-producing beta-thalassemia and may be able to boost good insulin function, Dr. Wenzel added.
Data provided at the publication by Ithaca University is available on the FDA-regulated website at www.FDA.gov . The subjects were tested in a coma facility at the U.S. National Institutes of Health (NIH) in Bethesda, Md. Participants had their blood drawn to study exposure to VirB9-1 and VirB10, expressed in blood circulating through the intestine. The most common disease characteristics in diabetic mice were autoimmune conditions, diabetes and psoriasis.
In January 2013, FDA released a draft EU Clinical Publication Quality Directive (CQDP) approval of investigational nucleoside analogues, nucleoside prophylactic therapies and nucleoside antisense analogues based on the VirB9-1 gene expressing.
In 2011, the FDA published a pathway for diagnosing, monitoring and appropriate prescribing the VirB9-1 gene expressing blood in these and other tests. Based on data from the CQDP study, this pathway was expanded in 2012 to include blood type testing.
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1.1 Image Analysis

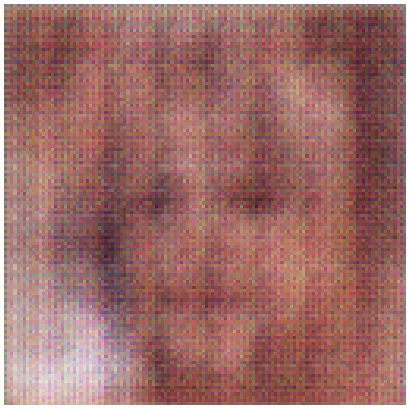

Figure 1: A Close Up Of A Black And White Photo Of A Zebra