Washington University in St. Louis
SCHOOL OF MEDICINE

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To: Cerebroretinal Vasculopathy (CRV) Kindreds

From: John P. Atkinson, M.D. and his laboratory

RE: Update

We are writing to update the families who have members afflicted with cerebroretinal vasculopathy (CRV).

We want to begin by thanking those of you who have supported our investigations on this illness through your monetary contributions to the CRV Project. These funds have been instrumental in allowing the laboratory to continue our clinical and basic science studies of this rare disease.

Nearly 20 families worldwide have now been identified to have CRV. The disease causing mutations are similar in each family, including five families who all have the same genetic defect. The clinical symptoms are remarkably uniform as well. We are in the process of preparing a comprehensive summary of the clinical, genetic and pathologic findings that we will publish in a medical journal. This article will help other physicians in identifying this illness and bring more attention to the disease. Most CRV patients are initially misdiagnosed with a stroke, brain tumor, diabetes, multiple sclerosis or vasculitis.

The mutated gene encodes for a protein known as TREX1. This protein is important in repairing your DNA and possibly in eliminating unnecessary or dangerous DNA. The mutation prevents the gene from functioning properly. There is increasing scientific interest worldwide in TREX1. Several other diseases have now been identified that have mutations in the TREX1 gene. In those cases, the mutations are usually of a different type and in a different part of the gene and lead to distinct diseases.

In the laboratory, we have prepared key reagents known as antibodies that allow us to identify the TREX1 protein in cells and tissues. This was not available before. We have shared this material with multiple groups. We are also in the final stages of obtaining mouse models of the disease. These mice will carry the same mutation in their TREX1 gene that is in our patients.

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Having an animal model can be an important part of providing a better understanding of the disease process as well as to eventually test therapeutic agents.

We are sad to report that several family members died this past year from this disease. Even at that difficult time, we appreciated the families allowing an autopsy to be performed so that we could gather more information about the disease process. Each patient we have followed and each autopsy performed has provided vital new information about the disease. Please contact us if you would like to receive more information or to obtain the appropriate forms to be included in such a study.

We are enclosing several informational items:

1) A pamphlet on CRV Project at Washington University.
2) An article in "Outlook" about one of our patients.
3) Means to contact us.

In summary, we have made important research strides to understand CRV, but we still have a long way to go. We encourage you to keep in touch (via e-mail, phone or letter) with our group. We will continue to regularly update you on this disease. If you know of other family members who would like to be on our mailing list, please contact us at:

E-mail: jatkinso@dom.wustl.edu

Phone: 314-362-8391

Mail: John P. Atkinson, M.D. @ the address below.

Sincerely,

John P. Atkinson, M.D.