

## Current projects and Publications

**Parminder J.S. Vig, Ph.D**  
**Professor of Neurology and Biochemistry**

### Funded Projects:

**National Institutes of Health (NINDS):** Mechanisms of ataxin-1 mediated Purkinje cell death

**Principal Investigator: PJS Vig** (start date 2/28/03; end date:-31-2009).

**National Ataxia Foundation:** Role of Bergmann glia in Purkinje cell development and pathology in SCA1.

**Principal Investigator: PJS Vig** (start date: 1-1-08; end date: 12-31-2008)

### Pending Projects:

**Mississippi Functional Genomics Network:** Mechanisms of neuron-glia interaction during development and disease.

**Principal Investigator: PJS Vig** (start date: 5-1-09; end date: 4-8-2013).

**Goal:** To develop new lines of mice using Cre/lox recombination system. These mice will express multiple fluorescent proteins in Purkinje cells under the control of Purkinje cell specific promoter. In addition, we will generate Cre-SCA1 mice to study normal and abnormal interactions between Bergmann glia and Purkinje cells.

### Publications (Journal Articles):

**PJS Vig**, SH Subramony, DR D'Souza, J Wei, ME Lopez. Intranasal administration of IGF-I improves behavior and Purkinje cell pathology in SCA1 mice. *Brain Res. Bull.* 69:574-579, (2006).

DR D'Souza, J Wei, ME Lopez, JD Hebert, SH Subramony, **PJS Vig**, Tissue transglutaminase crosslinks ataxin-I: Possible role in SCA1 pathogenesis. *Neuroscience Letters* 409: 4-9 (2006)

**PJS Vig**, M E Lopez, J Wei, D R D'Souza, S H. Subramony, J Henegar and JD Fratkin. Glial S-100B Vacuoles in Purkinje Cells: Earliest Morphological Abnormality in SCA1 Transgenic Mice. *J. Neurological Sci.* (Free access: Online Publication) 23: 166-174 (2006).

M Pande, A Harps, M Sundaram, **PJS Vig**. Role of nitric oxide in domoic acid induced hippocampal degeneration. J. Neurological Sci. (Free access: Online Publication) 24: 16-24 (2007).

**PJS Vig**, J Wei, Q Shao, MD Hebert, SH Subramony, and LT Sutton. Role of tissue transglutaminase type 2 in calbindin-D28k interaction with ataxin-1. Neuroscience Letters 420: 53-57 (2007).

JR Salameh, LM Talbott, W May, B Gosheh, **PJS Vig**, DO McDaniel. Role of biomarkers in incisional hernias. Am. Surg. 73: 561-567 (2007).

### **Presentations:**

**Vig PJS**, Subramony SH, D'Souza DR, Wei J, Lopez ME, Effects of intranasal administration of IGF-I on SCA1 transgenic mice. Society for Neurosci, 35<sup>th</sup> Annual Meeting, Abstract (2005).

D'Souza DR, Wei J, Lopez ME, Ard M, **Vig PJS**, Early role of tissue transglutaminase in SCA1 pathogenesis. Society for Neurosci, 35<sup>th</sup> Annual Meeting, Abstract (2005).

R Hourez, I Millard, L Servais, **P Vig**, H Orr, D Gall, S Schiffmann, M Pandolfo. An increased Kv4 current causes an early neuronal dysfunction contributing to neurodegeneration in spinocerebellar ataxia type 1 (SCA1). American Academy of Neurology, 59<sup>th</sup> Annual Meeting, Boston (2007).