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Research Interests

Our laboratory studies mutant mice in order to isolate genes responsible for neurological disease. We have discovered that ion channel mutations produce a broad spectrum of neurological dysfunction, including ataxia, dystonia, absence epilepsy, and progressive paralysis. We have mapped and characterized the corresponding human genes, and we are carrying out mutation screening in human patients with related disorders. By studying mice that are lacking a single ion channel, we can learn a great deal about the normal *in vivo* role of that channel. We are also generating transgenic mice with mutant channels in order to probe structure/function relationships and to evaluate the neurological consequences of specific changes in ion channel domains.

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00473