

# NeoTREX™

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## Generation of Caninized Monoclonal Antibodies for Cancer Treatment

Drs. Dawn Duval, Doug Thamm and Dan Gustafson at Colorado State University Animal Cancer Center have developed a methodology to successfully generate caninized antibody targeting the canine IGF-1 receptor. The IGF-1 receptor is over-expressed in a variety of human and canine cancers and stimulation of these receptors can contribute to cellular proliferation, invasion, resistance to apoptotic pathways, as well as promoting tumor angiogenesis. Strategies targeting IGF-1R for inhibition or down-regulation have been shown to inhibit growth of cells in culture as well as growth and metastasis of tumor xenografts.

The use of monoclonal antibodies targeted against cell surface antigens has been a growing resource in the treatment of cancer in humans. Since these agents are specific to the treatment of human disease, they cannot be utilized in the veterinary setting. This limits the treatment options for companion animal cancer to existing chemotherapeutic or radio-therapeutics. In addition, it limits the ability of researchers to explore the efficacy of new treatment modalities combining these passive immunizations with either chemotherapy or radiotherapy in companion animal models of cancer. This development to successfully generate caninized antibody targeting the canine IGF-1 receptor provides an attractive alternative to standard chemotherapeutic and radio-therapeutics for cancer treatment in companion animals that have demonstrated efficacy in human cancer treatment.

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### Inventor Information

Dr. Dawn Duval

Dr. Doug Thamm

Dr. Dan Gustafson

### Contact Information:

Steve Foster

Phone: 970.297.1276

Email: [steve@neotrex.org](mailto:steve@neotrex.org)

[www.neotrex.org](http://www.neotrex.org)

**Colorado  
State  
University**