Vascular endothelial growth factor (VEGF) is a signal protein produced by cells that stimulates lymphangiogenesis and angiogenesis. When VEGF is overexpressed, it can contribute to various disease conditions, such as cancer and age-related macular degeneration. The proposed technology modifies the polyadenylation mechanism, serving as a new drug for cancer and neovascularization disorders. It presents a new strategy for inhibition of angiogenesis and lymphangiogenesis through manipulation of VEGFR isoform expression. The VEGFR1 and VEGFR2 genes produce both membrane-bound and soluble isoforms, which have different effects on these processes. The membrane bound isoforms promote angiogenesis, while the soluble isoforms suppress lymphangiogenesis.

- Dual suppression of hemangiogenesis and lymphangiogenesis.
- Precise regulation of protein levels by knocking down one protein, while concurrently increasing the translation of another.
- Induction of a lesser inflammatory response and less off target binding (due to morpholino’s neutral charge).

**Recent Publications**

**Inventor Profile**
Balamurali Ambati, Ph.D., Professor - Ophthalmology and Visual Science