## MAURY STRAUSS DISTINGUISHED PUBLIC LECTURE

Presented by the Fralin Biomedical Research Institute at VTC



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## Understanding Human Pain, Relief, and Altered States of Consciousness using Brain Imaging

The ability to experience pain is old in evolutionary terms and shared across species. Acute pain is the body's alarm system, and as such it is a good thing. Pain that persists beyond normal tissue healing time (3-4 months) is defined as chronic – it is the system gone wrong and it is not a good thing. Chronic pain has recently been classified as both a symptom and disease in its own right. It is one of the largest medical health problems worldwide with one in five adults diagnosed with the condition. The brain is where pain emerges as a perception. Relating specific brain measures using advanced neuroimaging to the changes patients describe in their pain perception it tremendous value. Neuroimaging has afforded a better understanding and explanation of why someone's pain is the way it is. Researchers can go 'behind the scenes' of the subjective report to find out what key changes and mechanisms make up an individual's particular pain experience. Advanced neuroimaging studies can powerfully aid explanation of a subject's multidimensional pain experience, pain relief (analgesia) and even what makes them vulnerable to developing chronic pain. The application of this goes beyond the clinic and has relevance in courts of law, and other areas of society, such as in veterinary care. All of these issues will be discussed in Dr. Tracey's talk.

