The PATHWAY Pain & Sensory Evaluation System is an advanced, computerized, thermal stimulator designed for neurological and pain research, with potential applications in the clinical domain. CHEPS - Contact Heat Evoked Potential Stimulator delivers rapid heat pulses at a rate of up to 70°C/Sec from a baseline to 55°C in 250 milliseconds; enabling for the first time, selective activation and recording of small-nerve fiber cerebral-evoked potentials.

A-Delta & C-fiber activated potentials open up exciting new avenues of exploration in evaluation of neuropathies and neuropathic pain.

- Objective and non-invasive method to detect small-fiber neuropathies
- Rapid and sensitive method to differentiate neuropathies from chronic pain states
- Demonstrated correlation between CHEPS amplitudes and subjective pain experience
- Objective response to evoked-pain as influenced by experimental manipulations & treatments
- Use in fMRI environment synchronized with fMRI-compatible EEG recording for multi-modal evaluation of small-fiber function
- Potential new surrogate marker in pharmacologic development
- Rapid cold sensation stimulation enables recording of brain Evoked Potentials

Selected References


Debalissse D, Marrucci C, Villenure JD, Sihan DR, Pretorg E. Pain stimulation by using synchronized somatosensory evoked potentials (SSEPs) and contact heat evoked potentials (CHEPs). Posters (P18.1) / Clinical Neurophysiology 117 (2006) S121–S136.