UCLA Startup to begin clinical trials for wireless body-monitoring system

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(PhysOrg.com) -- MediSens Wireless, a startup company in UCLA's on-campus technology incubator at the California NanoSystems Institute, has obtained approval under federal Food and Drug Administration guidelines to begin clinical trials on its novel wireless body-monitoring system, which assesses muscle and neuromotor functions in the upper extremities.

The Clinical Movement Assessment System (CMAS) is designed for a wide variety of medical applications and could potentially benefit health care professionals and facilities specializing in the areas of physical medicine and rehabilitation, neurology, orthopedics, and physical and occupational therapy, among others.

MediSens moved to the new CNSI incubator in 2009 to begin commercializing licensed technology originally invented by a team led by Majid Sarrafzadeh, a UCLA professor of computer science and engineering and co-director of the Wireless Health Institute at UCLA. The company's mission is to design and deliver personal medical monitoring systems that advance human health.

"The data gathered by our monitoring system, CMAS, has the potential to enable health care professionals to improve care through early intervention and better tracking of outcomes and response to treatment," said Dr. Jay Rindenau, M.D., the company's chief medical officer.

The system also has potential for in-home use to assess patient progress

following neurotraumas and as a rehabilitative tool to expand the reach of telemedicine. In addition, CMAS could possibly be used to differentiate and help diagnose diseases states, such as Parkinson's disease, at an early stage with sensitive assessments of fine movements, according to Reggie Edgerton, Ph.D., a professor of neurophysiology at UCLA and co-inventor of CMAS.

The CMAS system consists of a clinical assessment device and associated software that will allow health care providers to capture current and ongoing muscle and neuromotor functions, thereby providing them with quantifiable, real-time data for their decision-making.

Clinical trials will establish the viability of CMAS. It is anticipated that the system will provide clinical assessments of fine motor movement, gross muscle strength, hand-eye coordination and patient response to treatment. Closely captured repeat assessments will lead to early warning and detection of deteriorating conditions.

According to MediSens' medical director, Dr. Nick Terrafranca, D.P.M., the trials are planned as a multicenter, multidiscipline study that will involve community hospitals and public health facilities, as well as Ronald Reagan UCLA Medical Center.

The first phase of the trial will deal with baseline evaluations and therapeutic exercise. The second phase will involve an in-depth analysis of different sensory-motor pathways. The success of the trial will be evaluated by the efficacy and cost effectiveness of the system in testing early interventions for better outcomes and long-term patient care.

Provided by University of California Los Angeles