

## **BioLert Ltd. - A wireless, watch-like device ALERTING caregivers of an on-going epileptic seizure**

Prolonged epileptic seizures can cause serious injuries, brain damage and death. Families and caregivers of patients with epilepsy are justifiably concerned about leaving them unattended, at home or outdoors, night or day. Patients, families, caregivers and neurologists are in desperate need of a simple, reliable alert system that can provide 24/7 monitoring in order to prevent accidents, decrease injuries, speed up emergency medical care, enhance their quality of life, have peace of mind, and improve treatment.

The EpiLert device consists of a small sensor (worn on the wrist or ankle) and a remote alert unit, the size of a cell phone. Upon detection of motor movements specific to epileptic seizures, the sensor unit transmits signals to the remote alert unit. This alerts the parent, caregiver or medical assistance service within 20 to 30 seconds of the onset of an epileptic seizure.

For outdoor use the alert to caregiver or medical assistance service will be provided via the cellular network and will include GPS location information.

The EpiLert also records essential data of epileptic episodes for further medical analysis.

The time structure, frequencies and spatial parameters of epilepsy movements are unique and thus can be differentiated from common daily non-epileptic movements. By analyzing recordings of epilepsy movements and their video as well as common non-epileptic movements, a set of rules were established (i.e. Algorithms) that identifies epileptic seizures. The Algorithms are constantly being updated as more data is accumulated.

The Epilert Vx model was manufactured mainly for hospital monitoring. It operates alongside the hospital's, golden standard, Video/EEG monitoring (unattended, 24 hours and more). The Epilert Vx set operates in conjunction with a computer (laptop) and performs epilepsy seizures identification and alert. In addition the set constantly records into the computer all patient's limb movements for off-line analysis and comparison with hospitals records.

Special graphic user interface (GUI) is provided for monitoring the patient's movements, the recording process and various technical parameters.

Initial clinical evaluations were concluded with very good results at the Comprehensive Epilepsy Centers of New York University School of Medicine and Tel Aviv Sourasky Medical Center. These initial tests yielded 100% success in detection of seizures that are longer than 30 seconds. Only 8 false alarms were reported during 1700 hours of hospital

patients monitoring. All 8 happened during daytime and as a result of vigorous intentional limb activity.

Further clinical trials are ongoing and two more US hospitals are expected to join this program.

According to the WHO (2005), epilepsy affects about 1% of the world population or 50 million people worldwide of whom 4 million (17%) are in developed countries.

The retail price of an EpiLert is estimated to be US\$650.-. This represents a multi billion US\$ market and our 5 years sales are estimated to be over US\$ 250 million.

BioLert plans to introduce a series of EpiLert products to suit various ages, needs and price levels in order to serve both developed and developing countries. All products will be FDA and CE certified.

BioLert commenced operations with US\$ 150 thousand in investments from angels plus US\$ 100 thousand from prize money. In order to conclude the design, start production, extend clinical trials, certification and commence sales, BioLert is seeking funding of US\$ 1 to 2 million over a period of 24 months. BioLert has been valued at \$4m.