WEARABLE DIALYSIS: TOWARDS A 2 POUNDS ARTIFICIAL KIDNEY

ryanchris October 23, 2009



Los Angeles, California – October 27, 2009: AWAK Technologies, Inc. is unveiling its peritoneal dialysis based wearable artificial kidney envisioned to weigh 2 pounds during her debut presentation at the American Society of Nephrology...

Los Angeles, California – October 27, 2009: AWAK Technologies, Inc. is unveiling its peritoneal dialysis based wearable artificial kidney envisioned to weigh 2 pounds during her debut presentation at the American Society of Nephrology (ASN) – Renal Week held at San Diego Convention Center from 29-31st October 2009.

Currently, AWAK (Automated Wearable Artificial Kidney) is a 6 pounds battery-operated prototype designed to provide 24/7 continuous dialysis. However, through continuous developmental effort, AWAK is working towards a weight of merely 2 pounds. This technological breakthrough is based on an original joint research with the

University of California, Los Angeles (UCLA) and the Department of Veterans Affairs, USA.

"It is truly a disruptive innovation that will change the landscape of the dialysis industry," said Dr Gordon Ku, Chairman of AWAK Technologies. "Besides improving the quality of life for patients, the paradigm changes from 'facilities-based dialysis' to 'personal-based dialysis', this is vital in lowering the cost of the national healthcare system. More importantly, it contributes to the economy by allowing patients to be economically productive."

"Freedom is the keyword," commented Dr Martin Roberts, Chief Scientist & Inventor, "AWAK returns the lifestyles back to the patients: to work, to travel and to play. Patients are now freed from dialytic regimes, freed from stringent dietary and fluid constraints, and freed from being bounded to a geographical locality.

Dr David B. N. Lee, Chief Scientist and inventor, said, "Based on the technique of peritoneal dialysis (PD) and sorbent-based regeneration of used dialysate in perpetuity, AWAK is both "bloodless" and "waterless". Round-the-clock dialysis and ultra-filtration represents the ultimate form of "frequent dialysis" and is expected to provide steady-state metabolic and fluid regulation. Because both the aqueous and the protein components of the used dialysate are regenerated and recycled, AWAK produces a novel protein-containing dialysate that is expected to reduce or eliminate protein-loss, with the additional possibility of removing protein-bound toxins."

The first prototype is designed to provide a net dialysate exchange rate of 4 L per hour. Based on a recent completed study on 8 patients using tidal peritoneal dialysis (reserve volume 500 ml, tidal volume 250 ml), this flow rate will translate into a weekly Kt/V of 4, a 100% increase over that used in current practice. AWAK will also incorporate a number of components focused on reducing infectious complications. The device is in the process of procuring FDA certification and is planned for clinical trials in the United States and Singapore in 2010.

About AWAK Technologies

AWAK Technologies was incorporated in April 2007 with the mission of Saving, Sustaining & Enhancing Lives of End-Stage Renal Disease (ESRD) patients. AWAK, *The Wearable Dialysis Company* dedicated to the development of wearable artificial kidneys, was founded by Dr Gordon Ku (Chairman of Kidney Dialysis Foundation), Dr. David B. N. Lee and Dr. Martin Roberts (both of the United States Department of Veterans Affairs Healthcare System and David Geffen School of Medicine at UCLA), and Mr. Neo Kok Beng. Dr David B. N. Lee and Dr Martin Roberts are also inventors of the licensed technologies and serve as Chief Scientists in the Company.