



THE UNIVERSITY of TEXAS

HEALTH SCIENCE CENTER AT HOUSTON

Office of Technology Management

METHOD OF IDENTIFYING PATIENTS AT RISK OF ELEVATED INTERCRANIAL PRESSURE

Market: The CDC estimates that 1.4 million people are treated for traumatic brain injury (TBI) in the United States each year. Of this patient population, a certain portion will, for reasons not fully understood, develop elevated intracranial pressure (ICP), and this secondary pathology is a major contributor to morbidity and mortality. If patients likely to develop elevated ICP could be singled out for monitoring or early application of treatments, many lives could be saved. The current, invasive, surgical procedures required to monitor patients with severe head injury and ICP represent a preventable cost of more than \$918 million dollars each year to the U.S. healthcare system. Presumably, some of this cost could be avoided by screening and performing procedures only on patients known to be at risk for elevated ICP.

Competitors and Current Problems: Because symptoms indicating elevated ICP are subtle and often do not manifest immediately after a traumatic event, diagnosis is often delayed and imperfect. All three options for monitoring ICP in TBI patients - the epidural sensor, the subarachnoid bolt, and the intraventricular catheter – are invasive and require drilling a hole through the patient’s skull. There is, therefore, a significant and unmet need for a simple, inexpensive, and non-invasive device or system which will help health care providers determine which TBI patients will develop elevated ICP

The Technology: Researchers at the University of Texas Health Science Center at Houston (UTHSCH) have developed methods of diagnosing individuals at risk of elevated intracranial pressure (ICP) soon after traumatic brain injury (TBI), based on the discovery that a life-threatening elevation in intracranial pressure after a head injury is preceded by specific changes in a patient’s blood chemistry. These changes can be detected using assays that are non-invasive, relatively inexpensive, and can be incorporated into routine procedures, thus yielding prompt and early diagnoses.

NON-CONFIDENTIAL TECHNOLOGY DESCRIPTION

The preceding is intended to be a non-confidential summary of a novel technology created at the University of Texas Health Science Center at Houston (UTHSCH), for which the University has obtained patent protection.

UTHSC-H Ref. No.: 2009-0002

Lead Inventor: P.K. Dash

Patent Status: Pending

License Available: world-wide; exclusive or non-exclusive

To obtain further information about this technology, please contact:

Office of Technology Management, 7000 Fannin, Suite 720, Houston, TX, 77030

Phone: (713) 500-3369 Fax: (713) 500-0331

Email: uthsch-otm@uth.tmc.edu