



Company

Banyan Biomarkers, Inc. was founded in 2002 by Drs. Ron Hayes, Kevin Wang, and Nancy Denslow, with the vision to commercialize *in vitro* diagnostic tests for the detection of brain injury and neurological diseases. Initially inspired by research conducted at the University of Florida and The Evelyn F. and William McKnight Brain Institute, Banyan Biomarkers has made significant progress in developing and clinically validating novel enzyme linked immunosorbent assays (ELISAs) for traumatic brain injury (TBI). Banyan scientists have created an extensive pipeline of potential biomarkers and the company has a robust intellectual property portfolio. Jackson Streeter, Banyan's CEO, has extensive experience in development of medical devices for acute brain injury.

Traumatic Brain Injury

Each year in the United States, approximately 1.4 million people are treated and released from an emergency room as result of TBI.² It is one of the most common neurological disorders and a leading cause of death and disability claiming over 50,000 lives each year.³ Automobile accidents, falls, sports related injuries, and assaults are common causes of TBI. Soldiers have a higher rate of experiencing TBI, in fact, the U.S. Defense Department estimates that as many as 20% of veterans suffered some degree of brain injury due to bomb blasts while in Iraq or Afghanistan—a staggering 360,000 men and women.⁴

Technology

Currently, no simple point-of-care blood test exists for use by physicians in the emergency room or in the hospital to detect the presence and severity of brain trauma. Following a brain injury, a destructive cascade of biological events continue over hours and days that may worsen the patient's condition. This cascade includes the activation of two enzymes, calpain and caspase, which break down proteins in brain cells, resulting in progressive damage and death of brain tissue.¹ Banyan Biomarkers have discovered a number of protein fragments in the blood of brain injured patients soon after injury and has developed biomarker assays to quantify these protein biomarkers.



Clinical Strategy

Banyan Biomarkers has secured over \$70mm in grants for biomarker discovery diagnostic development, and clinical validation. In addition to TBI, Banyan has successfully secured grants for development of biomarkers for stroke, liver injury, and other serious conditions. Currently, the company is planning to sponsor a pivotal trial to diagnose TBI in patients using biomarkers.

Product Pipeline

Banyan Biomarkers possesses a unique self-supporting research infrastructure to develop a novel product pipeline for diagnostics and therapeutics. Areas of research with the company's proprietary biomarkers include: Stroke, Liver Disease, Alzheimer's disease, Parkinson's Disease, Huntington's Disease, and Depression. Banyan also has early stage therapeutic candidates for neuro-protection.

1. Wang K. Calpain and caspase: can you tell the difference? *Trends in Neurosciences* 2000 January; 23 (1): 20-26.
2. www.cdc.gov/ncipc/tbi/TBI.htm
3. Ibid
4. www.msnbc.msn.com/id/29513359

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