

Breakthrough in NMR

WaveGuide Corporation, an innovator of portable micro NMR (Nuclear Magnetic Resonance) instruments, recently launched its new WaveGuide Formula™, the world's only battery-powered, compact scientific instrument that performs rapid screening and diagnostics of solid and liquid substances spanning an array of markets and applications. "Until now, the size, cost and complexity of commercially available NMR platforms has limited their use to low volume and niche applications with high fixed costs," says Nelson K. Stacks, CEO and President of WaveGuide Corporation. "The WaveGuide Formula™ is truly a revolutionary development, opening the door to a range of in-situ applications in healthcare, consumer products, and industrial products that were previously impractical or impossible with the existing NMR technology."

Mr. Stacks joined the founder of the company about 5 years ago to help fund and manage this most interesting technology which was spun out of Harvard University. "Having lost my grandmother, mother and sister all to cancer I saw an opportunity to help people with an early detection platform and thus that was how we initially focused the company on both cancer and infectious diseases like TB," he explains. "We've placed those applications somewhat on the back burner for now though we had made outstanding progress with Ovarian Cancer and Tuberculosis detection. Currently we're focused on helping multiple industries with testing of counterfeit/suspect pharmaceuticals and various other consumer products in various stages of production from vaccines and therapies to edible oils and motor oils."

Underscoring his words, the new WaveGuide Formula™ micro NMR promises to deliver performance as good or better than larger, more costly benchtop NMRs, in a portable, easy-to-use device. This makes it ideal for applications requiring in-situ decision making, including pharmaceutical, petrochemical, food quality, food safety, and consumer product authentication

applications. The product is based on patented technology that enables small, low-cost, inhomogeneous magnets to produce a handheld chemical analyzer based on NMR, amplifying the NMR signal-to-noise by a factor of 10,000. WaveGuide has applied for six additional patents, bolstering the core technology. "To the best of our knowledge, we make the world's smallest NMR," Mr. Stacks states. "We enable the user to take the test to the "patient" or in the field with a handheld battery-operated portable system. By bringing the test to the patient in remote settings instead of requiring the sick patient to travel and possibly infect others we can help reduce transmission of disease and provide a very rapid result to enable initiation of proper medication immediately."

Mr. Stacks expects that WaveGuide Formula will help WaveGuide expand its global reach, in use cases ranging from



testing oils and fluids for component breakdown through to testing for diseases such as cancers, and infectious diseases such as Tuberculosis, viruses and other pathogens. "We would like to be able to help save lives through these efforts."

WaveGuide customers include biopharmaceutical manufacturers, hydrocarbon processing and refining plants, dairy producers, and U.S Federal agencies. The company is headquartered near Cambridge, Massachusetts.

