



SENIOR  
SCIENTIFIC

A Manhattan Scientifics Company (OTC: MHTX)

[www.seniorscientific.com](http://www.seniorscientific.com)

A SENIOR SCIENTIFIC UPDATE – ISSUE 4: MAY 2015

## A Letter from the New President of Senior Scientific LLC

Cancer continues to be one of the leading causes of mortality globally. Despite technical advances in science and medicine made in the last 150 years we still lack effective forms of therapy for many types of cancer, and the general consensus within the medical community is that more lives could be saved if cancer could be detected earlier.

Today cancer diagnostics is a \$100 Billion market growing at a Compound Annual Growth (CAGR) of >7%, with imaging techniques accounting for the largest portion. Yet, imaging methods such as MRI, PET, ultrasound and the like, are neither sensitive enough nor specific enough to detect cancer early and effect treatment decisions. It is clear that the sooner patients and physicians are aware a problem exists, the more choices for treatment and positive outcomes there will be. And, while the drive towards personalized medicine is being made by improvements in molecular methods, they rely on expensive and invasive biopsy procedures. We believe our magnetic relaxometry (MRX) technology holds great promise to positively affect both these areas and change the way cancer is diagnosed.

### The Time is Right

After spending 25+ years bringing new life science and medical device technologies to market, including the last five years as President of US Operations and Global Chief Commercial Officer for a company with image-based cell sorting technology for cancer research and diagnostics, I was excited by the opportunity to lead Senior Scientific. After kicking the tires and doing some homework, it was evident that the MRX technology pioneered by Dr. Flynn presented a once-in-a-lifetime opportunity to bring a true game-changing technology to the global healthcare markets. We believe a non-invasive method of diagnosing specific types of cancer that provides the physician with actionable results offers the potential to be a highly valued product.

### About Our Business

We have strong intellectual property protection that covers the MRX technology for a wide variety of applications, not just cancer diagnostics. The technology includes both the MRX detection instrument that would be installed at a hospital or clinic and the nanoparticles that are used for each diagnostic test. This creates a classic “razor / razor blade” business model for us to leverage. We believe that our MRX instrumentation should cost less to manufacture and deliver than current conventional imaging technologies like PET and MRI, which should reduce barriers to adoption in the market and make it attractive for prospective commercial partners. Additionally, since our test is intended to be used instead of more invasive biopsy procedures which can cost as much as \$1,000 - \$2,500 for a simple needle biopsy or as much as \$10,000 or more for surgical

procedures, we believe that our nanoparticle tests will be able to be priced competitively and contribute a high-margin/high-volume consumable revenue stream. Value will be generated as we undertake licensing deals for the technology for specific fields of use and/or establish partnerships with large medical device suppliers to bring the product to market. We expect that both we and our commercial partners will have opportunity to partner with pharma and biotech since our MRX technology provides an ideal platform for companion diagnostic tests that are highly specific for their therapeutic and non-invasive for the patient.

## Accelerating Our Programs

The path to commercial introduction will require we navigate through certain scientific and regulatory benchmarks. Our collaboration with MD Anderson continues to make progress. But it is not enough. Since joining Senior Scientific, I have initiated plans to build additional MRX systems and diversify our scientific and medical collaborations beyond the relationship with MD Anderson. I expect us to establish formal pre-clinical research programs with additional prominent cancer centers for use of our MRX systems.

Looking inward, our nanoparticle production laboratory is nearing completion and is expected to be ready to support the increase in nanoparticle supply we will need to deliver to our collaborators. Additionally, anticipating fruitful outcomes from our expanded collaborations I have initiated programs that will prepare us for the regulatory process we will need to undertake for human clinical studies.

This puts us in a great position: we have a technology that works, we have money and resources to develop the technology, and we have a market in need of what we can provide - a sensitive and specific way to detect cancer in the body. With the support of our shareholders, we can make a difference!

With great enthusiasm,



Robert Proulx  
President & COO

### ABOUT SENIOR SCIENTIFIC

Senior Scientific is dedicated to early detection, mapping and quantification of cancer and other human diseases. Our proprietary technologies and methods employ magnetic nanoparticles targeted towards cells associated with cancer and other diseases and provide the ability to detect these cells through highly sophisticated magnetic sensors.

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Forward-looking statement: This newsletter contains forward-looking statements, which are subject to a number of risks, assumptions and uncertainties that could cause the Company's actual results to differ materially from those projected in such forward-looking statements. Management at Manhattan Scientifics believes that purchase of its shares should be considered to be at the high end of the risk spectrum. Forward-looking statements speak only as of the date made and are not guarantees of future performance. We undertake no obligation to publicly update or revise any forward-looking statements.