

EXECUTIVE SUMMARY

RMT-EPIGENOMEX, INC.

A BUFFALO BASED COMPANY

REDUCING TIME & COST FOR DRUG DISCOVERY

ARGENETICS™

43N
SEMIFINALIST

EXECUTIVE SUMMARY

RMT-Epigenomex Inc. (RMT) partners with biotech and pharmaceutical companies, contract research organizations and academia to significantly reduce the time and cost required to develop new drugs. According to the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA), it takes between 10 and 15 years to develop a new medicine and costs an average of \$1.4 billion to develop a single drug. The drug discovery and pre-clinical phases alone have an estimated cost in excess of \$800 million with a time frame reaching 5 to 6.5 years. By our estimates, RMT's technology reduces drug development time and costs by an estimated 40%. This represents a decrease of approximately 2 to 3 years and over \$300 million in assumed savings based on the \$800+ million cost for discovery and pre-clinical stages.

As a subset of the estimated \$1.2 trillion pharmaceutical market, epigenetic drugs have emerged as market disruptors offering considerable advancements for disease diagnosis and the discovery of new drugs. The field of epigenetics has been expanding rapidly and adding significant breakthroughs in our understanding of the regulation of human gene expression.

RMT continues to build a patent portfolio that exploits the unique protein structural signature shared by most methylarginine proteins to facilitate drug discovery. The proprietary designs of RMT's technology to determine protein methylation status require much less empirical adjustment and validation of the chemical and biological screening steps employed by other epigenetic drug discovery and development platforms, such as DNA methylation, lysine methylation and histone acetylation.

HIGHLIGHTS

- ❑ **RMT PROVIDES A BETTER TOOL**
- ❑ **OUR ARGININE-BASED TECHNOLOGY IS READY TO BE COMMERCIALIZED**
- ❑ **SOMEONE WILL TAKE THE LEAD – WE ARE PERFECTLY POSITIONED TO BE FIRST-TO-MARKET**
- ❑ **ARGENETICS™ SERVICE LAUNCH EXPECTED IN JANUARY 2015**
- ❑ **ACQUIRING CH3 BIOSYSTEMS**
- ❑ **STRONG AND EXPERIENCED MANAGEMENT TEAM**
- ❑ **FOCUSED ON GROWING SHAREHOLDER VALUE IN A STRONG INVESTMENT ENVIRONMENT**

WHAT IS EPIGENETICS?

A simple way to understand epigenetics is to think of the genome (DNA) as being a computer's hardware and the epigenome (epigenetics) as the software that tells the computer how to work. Many in the scientific community have suggested that genome science by itself has failed to deliver on its early promise of new drug development. This is principally due to the fact that errors and mutations in genes result in a severely broken or defective system that is extremely difficult to repair with drugs or even with human genetic engineering. By comparison, the epigenome activates or represses human genes by mechanisms that place chemical marks called "methyl-groups" either directly on the DNA of genes or on protein molecules that attach directly or indirectly to genes. These interactions with DNA regulate the genetic programs ("expression" of genes) that keep us healthy or cause disease.

WHY IS RMT FASTER?

One of the key differences between RMT and competing technologies is that arginine is based on a "Shared Signature" – a chemical structure that is common to most arginine methylation proteins.

REASONS BEHIND “SHARED SIGNATURE” TIME SAVINGS:

1. Our competition has to identify the relevant protein sequences and create detection tools for each chemical change to individual protein targets – **RMT does not** since we focus on the “Shared Signature”.
2. Our competition has to repeat set up and testing of peptides for each drug candidate – **RMT does not** and we can move quickly into high throughput screening.
3. When RMT’s technology is integrated in the mass spectrometry platform in the preclinical stage we can achieve additional reductions in time-consuming contract research.
4. Other methods to determine protein methylation status use radioactive materials to identify and track protein targets with attendant costs for licenses, safety and disposal. RMT eliminates the need for radioactive isotopes, thereby eliminating major expenditures required by the methods used today for determining protein methylation status.

OTHER BENEFITS:

1. **May be able to achieve Better Targeting and Effectiveness:** By targeting the Shared Signature, we can screen at the Discovery Stage with confidence that our results can be applied to a very broad range of potential arginine methylation drug targets at later stages of drug development.
2. We are **not limited to any disease state** since we apply our platform throughout all of the stages of drug development and regardless of which disease category is under investigation.

MANAGEMENT TEAM

John Aletta - Chief Scientific Officer - John was the first to demonstrate a requirement for specific protein methylation in the cellular development of neuronal model systems. As a faculty member in the Department of Pharmacology and Toxicology at the SUNY at Buffalo School of Medicine & Biomedical Sciences, John spent 17 years teaching and contributing peer-reviewed research in the fields of post-translational protein modification and methylation biology. He received his doctoral degree while working in the Center for Neurobiology and Behavior at the Columbia University College of Physicians and Surgeons in New York City in 1984. In addition, he earned two Masters level degrees in Pharmacology at Columbia University (M.A. 1980 and M.Phil. 1981) prior to completing the Ph.D. Following postdoctoral training in cellular/molecular biology at NYU, Dr. Aletta returned to the Columbia College of Physicians and Surgeons as a faculty member in the Department of Pathology.

Joe Harris - President and Chief Executive Officer - Joe has over 25 years of experience in mergers and acquisition and venture capital, and has a diverse background in the health industry, accounting, and law. He served in senior management positions at various electronics and medical device companies including Glaxo SmithKline, and Eastman Kodak Company, where he completed over \$16 Billion in M&A transactions. He previously served on the Board of Directors of PacificHealth Laboratories and Orthovita. He is a CPA with a JD, an MBA in Finance and a BS in Accounting from Syracuse University.

Steve Dondero - Chief Operating Officer and Chief Financial Officer - Steve is an investment professional with 25 years of experience in private equity, capital markets and early-stage investing. Steve is on the Advisory Committee for Star Mountain Capital, a Small Business Investment Company fund-of-funds and has private venture investments in industries including healthcare and technology. Steve holds an MBA in Finance and International Business from Fordham University and a Bachelor of Engineering degree in Electrical Engineering from Stevens Institute of Technology.