

METABOLIC RESEARCH, INC.

(OTC BB:MTBR)

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Recent Price: **\$0.99**  
Target Price: **\$1.75**  
(12-month)

SPECULATIVE POSITIVE RATING

Engineering Potent Natural Therapeutics from Fungi

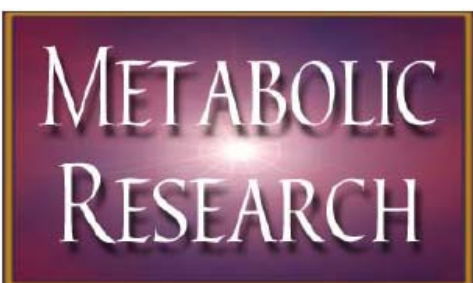
Company Overview

Metabolic Research, Inc. (OTC:BB – MTBR) is a biotechnology company developing a new form of pharmaceutical-grade non-synthetic pharmaceuticals aimed to safely and effectively treat arthritis, cancer, and metabolic and inflammatory diseases. MRI's proprietary process is based on "growing" drugs by using natural metabolic processes of plants or fungi rather than chemical synthesis used by traditional pharmaceutical companies.

Main Headquarters

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- Metabolic Research, Inc. has recently acquired a North American **license for two provisional patents/methods**. MRI's short-term game plan calls for using these patents to develop a **natural drug to effectively treat arthritis**.
- The Company's second strategy is to **acquire an additional license** agreement for a **nonsynthetic cancer-fighting** product, a natural **beta glucan/lectin combination drug**, from the same party that developed the anti-inflammatory application. To this end, the company is finalizing a strategic alliance to co-develop and market a cancer-fighting product.
- The patent covering lectin/beta glucan technology is "**Grandfather Technology**" and lends itself to further synthesis and disease-specific sub-sets of patentable pharmaceutical "indicated use", opening up the **potential to licensing or cross-licensing** by "Big Pharma" e.g. Merck, Bristol Myers/Squibb, Glaxo, Novartis, or others.
- Upon development of its products, **MRI intends to monetize its research** through **direct and multilevel marketing sales, IP licensing and pharmaceutical development**. The **oncology drug market** is currently estimated to be **more than \$40 billion annually**. And, the current United States market potential for **rheumatoid arthritis therapeutics is approximately \$48.5 billion**.
- According to the **World Health Organization**, more than **10 million people are diagnosed with cancer every year**, and it is estimated that there will be **15 million new cases every year by 2020**.
- The number of **Americans with arthritis or chronic joint symptoms** has steadily increased from 37.9 million in 1990 to **48 million in 2007 (nearly 1 in 5 adults)**. **By 2030, 20 percent of Americans – about 72 million people – will have passed their 65th birthday and will be at risk for osteoarthritis**. If arthritis prevalence rates **remain stable**, the number of affected persons over 65 years will **nearly double by 2030**.
- MRI's research in metabolic pharmaceuticals is in its **initial phases**, and preliminary research suggests its **processes could be used to develop safe and highly effective naturally produced pharmaceutical-grade anti-cancer, anti-inflammatory, anti-infective and anti-viral substances** to fight a broad range of diseases and these methods are further **compatible to any fungal species**.
- A major springboard for unprecedented growth exists for the company that is able to develop effective new drugs for treatment of arthritis and/or anti-cancer substances for commercial application**. Metabolic Research shares offer **shareholders access to this intellectual property and expertise of top medical researchers looking to develop and commercialize such treatments based upon its revolutionary proprietary process that uses the natural metabolic process of plants/fungi, rather than chemical synthesis**. Metabolic Research is **positioned to benefit substantially if it is able develop new effective arthritis and cancer treatment alternatives at a fraction of the cost typically incurred by traditional pharma to bring a chemically synthesized new drug to market**. It may also benefit from the all-natural status of its IP that is not subject to the FDA approval process that can unlock licensing agreements with large pharma companies if its R&D work proves successful. See **INVESTMENT THESIS & RECOMMENDATION** for more in-depth discussion (Page 13-16).

METABOLIC RESEARCH INC.

(all figures in millions)

52 Week Hi/Lo Range	0.90/0.75
Fiscal Year End	31-Dec
Shares Outstanding (08/10/2006)	8.1
Float (approximately)	6.0
Share price (02/20/2007)	0.82
Market Capitalization	6.7
Average Volume (3 months)	NA
Insider Ownership(approximately)	28%
Institutional Ownership	
Enterprise Value (EV)	6.67
Long Term Debt (09-30-06)	0.000
Total Cash (09-30-06)	0.000

12/31/2007 12/31/2008

FY2007 E FY2008 E

Earnings Per Share (EPS) 0.013 0.047

Book Value (\$/share) 0.002

FY2007 E FY2008 E

Total Revenue	1.098	3.600
Cost of Sales	0.252	0.828
Gross Profit/Loss	0.846	2.772
Operating expenditures	0.683	2.160
Income/Loss from Operations	0.163	0.612
Other Expenses	0.000	0.000
Tax Items	0.057	0.214
Net Income	0.106	0.398

NA = Not applicable/Not Available.

A = Actual Reported figures E = Estimates

Balance Sheet & Financial Statement Extracts (09-30-2006)

Current Assets	0.002
Current Liabilities	0.020
Total Assets	0.036
Total Shareholders Deficit	0.016
Accumulated Deficit	1.056

Capital Structure (02-01-2007)

Authorized Common Stock	80 000 000
Authorized Preferred Stock	20 000 000

## COMPANY

Metabolic Research, Inc. (MRI) is a biotechnology company developing a new form of pharmaceutical-grade non-synthetic pharmaceuticals to **safely and effectively treat arthritis, cancer, and metabolic and inflammatory diseases**. MRI's **proprietary process is based on "growing" drugs by using natural metabolic processes of plants or fungi rather than chemical synthesis** used by traditional pharmaceutical companies. The company was incorporated on October 7, 1996 in the State of Indiana and the company amended its articles of incorporation to change its name from Datastand Technologies, Inc. to Metabolic Research Inc. on February 1, 2007. The Company is listed and trading on the OTC Bulletin Board under the ticker symbol MTBR.

Although the company plans to use the **Agaricus Blazei Murril (ABM) mushroom**, this process is **compatible to any fungal species**. The company's research in metabolic pharmaceuticals is in its initial phases, and preliminary research suggests this process could be used to develop safe and highly effective naturally produced pharmaceutical-grade anti-cancer, anti-inflammatory, anti-infective and anti-viral substances to fight a broad range of diseases.

Metabolic Research, Inc. has recently acquired a **license for two provisional patents** "*Composition and Method of Producing Endogenous Therapeutic Anti-Inflammatory Eiconasids and their Metabolites by Exogenous Oral Means*," and "*Method and Process for Producing Anti-inflammatory Products from Fungi*." MRI's short-term game plan calls for using these patents to develop a **natural drug to effectively treat arthritis**.

The company also intends to acquire an additional license agreement for a **non-synthetic cancer-fighting product**, a natural **beta glucan/lectin combination drug**, from the same party that developed the anti-inflammatory application. To this end the company is finalizing a strategic alliance to co-develop and market a cancer fighting product. This conjugate is designed to circulate throughout the body until it identifies, binds with and kills cancer cells within the body. The **lectin component blocks the nuclear uptake sequence of cancer cells**. The **beta glucan stimulates the body's immune system** to target and kill the cancerous cells. The significance of the company's license agreements is that the patents covering lectin/beta glucan technology is "**Grandfather Technology**" and lends itself to further synthesis and disease-specific sub-sets of patentable pharmaceutical "indicated use", opening up the potential to licensing or cross-licensing by "Big Pharma" such as Merck, Bristol Myers/Squibb, Glaxo, Novartis, or others.

Upon development of its products, MRI intends to monetize its research through direct and multilevel marketing sales, IP licensing and pharmaceutical development. The **oncology drug market is currently estimated to be more than \$40 billion annually**. And, the current United States market potential for **rheumatoid arthritis therapeutics is approximately \$48.5 billion**.

## STRATEGY & PLAN OF OPERATIONS

Metabolic Research is involved in developing a new form of pharmaceutical grade non-synthetic pharmaceuticals to **safely and effectively treat arthritis, cancer, and metabolic and inflammatory diseases**. MRI's **proprietary process is based on "growing" drugs by using natural metabolic processes of plants or fungi rather than chemical synthesis used by traditional pharmaceutical companies**.

## METABOLIC PROCESS TECHNOLOGY – FUNGI BASED PROVISIONAL PATENTS

Only recently has Western society found what Eastern cultures have long known for centuries, that **fungi**, especially mushrooms have within them **some of the most potent nutritional substances and medicine found in nature**. Their cellular constituents can profoundly improve the quality of human health. Differing from most pharmaceuticals, these healing agents have **extraordinarily low toxicity**, even at high doses. Acupuncture and the use of Traditional Chinese Medicine (TCM) are examples of East-West merger of medical treatments.

Fungi share a more recent common ancestry with animals than with plants, protozoan, and bacteria. Fungal medicines are therefore active against many diseases that afflict humans. Many scientists believe this relationship occurs because **humans are more closely related to fungi than to any other kingdom**, having shared a common ancestor more than 460 million years ago, and thus **developed defenses against mutual microbial enemies**. The healing properties of mushrooms have been widely documented in Western scientific research. For example, **Cordyceps** have anti-bacterial, anti-viral and anti-tumor properties and help regulate cholesterol and blood pressure. **Maitakes** have strong anti-candida properties and they greatly enhance the immune system. **Reishi mushrooms** have a wide variety of therapeutic effects, including but not limited to supporting liver and cardiovascular function as well as moderating blood sugar levels.

Fungi have developed a unique capability to utilize their environment exclusively to adapt to survive in a total parasite-like form in nature. **Fungi do this by taking in all of their required nutrients from their host environment**. In other words, whatever nutrients are fed to fungi, that's what fungi will build upon and produce more of. For example, if you wanted fungi to produce fatty acids, you would simply feed various liposterols to them.

Metabolic Research, Inc. has **recently acquired a North American license** to a method that describes how various fungal products in their natural state could be induced to uptake the proper exogenous food materials into their metabolic processes. Through metabolization of these products, fungi could then produce a vast array of metabolic end-products with pharmaceutical-grade healing properties.

Dr. S.N. Chen, member of MRI's scientific team, and Distinguished Professor of Life Sciences at the National University of Taiwan, is one of the world's most renowned researchers in fungi growth as well as isolation of betaglucan and other fungal medicine. **Dr. Chen has developed the techniques and processes for growing medicine using fungi.**

The details of these techniques and processes are proprietary. However, the process is called "**submerged fermentation**", which greatly accelerates the growth of fungi. For example, growing mushrooms in a controlled environment such as hot houses requires approximately six weeks to grow **Agaricus Blazei Murrill** mushrooms to full maturity. Using **submerged fermentation** and the company's newly developed method of "**agitated propagation**", MRI can complete the process within 14 days.

**A breakthrough discovery using fungi, plant, or animal sources to produce anti-inflammatory and analgesic products** aimed at treating and curing inflammatory disease includes a Provisional Patent application titled: **Composition and Method of Producing Endogenous Therapeutic Anti Inflammatory Eicosanoids and their Metabolites by Exogenous or Oral Means** (USPTO Serial number 60/570,649).

The above invention teaches the use of cyclooxygenase-2 (COX-2) inhibitors, which are the most useful products, discovered to date for down regulating, or **blocking the arthritic-producing enzyme COX-2**. Both **Merck and Pfizer's (Celebrex™)** and **Vioxx** introduced pharmaceutical COX-2 blockers in the late 1990's with enormous initial success. However due to the solvent nature of cyclic hydrocarbons on arterial plaques both products were removed from the market by the FDA in early 2001 and 2002 from literally thousands of deaths due to fatal blood clots. The invention described above **relies upon an entirely different and natural occurring hormone to reduce or block COX-2 induced inflammation.**

Using the above citation as state of the "art" the two provisional patents are based on use of fungi to produce highly potent natural anti arthritics. These methods are inventions that synergistically incorporate two separate biological actions to help treat and/or cure arthritic conditions.

#### ⊕ **Method and Process for Producing Metabolic Production from Fungi**

The first invention is a method and process to extract certain poly unsaturated fatty acids (PUFAs) found in abundance in the Agaricus Blazei Murrill (ABI) mushroom (and others) which produce the biological production of prostaglandin E-1 (PGE-1) and E-3 (PGE-3) **blocking the production of Prostaglandin E-2** (PGE-2), the initiator of COX-2.

### ⊕ Process for Producing Lectin Products from Fungi

The second invention combines the above with methods and process for the **extraction of certain lectins** such as sodium pyroglutamate to reduce the formation of angiogenesis in and around the inflamed joints and tissues. Angiogenesis, i.e., the induction of new blood vessels from existing vasculature, is a crucial event in the formation and maintenance of the pannus tissue in rheumatoid arthritis (RA). This form of arthritis is characterized by the destruction of peripheral joints in which the cartilage and bone are destroyed by proliferative synovitis. This condition is characterized by infiltration of inflammatory cells and formation of new blood vessels.

This suggests that **inhibition of angiogenesis (anti angiogenesis) may play an important role in the treatment of both Osteo- and Rheumatoid arthritis**. In particular, inhibition and/or disruption of new blood vessels cannot only prevent delivery of nutrients to the inflammatory site, but can also lead to vessel regression, hence reversal of the disease. The **hematoglutinates** in the ABI mushroom have repeatedly **demonstrated anti angiogenesis** and reducing the blood supply to tumors in cancer patients. These two important functions are **combined with a natural stem-cell recruiter** which **mobilizes de novo progenitor stem cells** from the bone marrow to **aggregate and replicate in and around bone/cartilage contact points** with new collagen and fascia to **replace worn cartilage and joint tissues**.

## RESEARCH & DEVELOPMENT OF PATENTS

### ARTHRITIS R&D

Metabolic Research's short-term game plan calls for using these patents to **develop a natural drug aimed at effectively treating osteoarthritis and rheumatoid arthritis**. Arthritis is an inflammatory condition of the joints caused by excessive expression of the cells of an enzyme called cyclooxygenase-2. The release by cells of this powerful enzyme causes the tissues in and around the joints to release a hormone called prostaglandin E-2 that modulates the inflammation processes. Cyclooxygenase 1 has just the opposite effect. This enzyme causes the cells to synthesize the most powerful anti-inflammatory in the body, prostaglandin E-1, commonly referred to as the "Master Hormone." By feeding the spores certain nutrients, MRI is able to increase the metabolic processing of the nutrient to produce a special unsaturated fatty acid, which is then used to supply a special 20-carbon polyunsaturated fatty acid, which produces prostaglandin E-1 in the body. **The mushroom fungi produce a precise replication of the pre-designed engineered compound.**

The natural prostaglandin E-1 modulator of the 20-carbon eicosatetraenoic acids coupled with a natural analgesic triglycerides found in mushroom fungus produces the safest and most effective natural anti inflammatory pain medicine. In rheumatoid arthritis, the condition is aggravated by the constant release of angiogenic growth factors. This causes a continuing sprouting of small blood vessels, which leak cytokines (inflammatory cell chemicals) into the inflamed area. **MRI's anti-arthritis drug will include anti-angiogenic lectins to block new blood vessel growth found in rheumatoid arthritis.** Should the company's conclusions be accurate, this design will create the most potent natural anti-inflammatory drug available.

In the medium to long term its plan extends to developing a natural Cancer Drug that can lead to market share gains in the oncology market. Such a secondary product will broaden its scope of products that can complement sales of its anti arthritic drug and decrease the dependence of revenues on the arthritis market.



**ONCOLOGY R&D**

The company also intends to acquire an **additional license agreement for a non-synthetic cancer-fighting product**, a **natural beta glucan/lectin combination drug**, from the same party that developed the anti-inflammatory application. To this end the company is finalizing a strategic alliance to co-develop and market a cancer-fighting product.

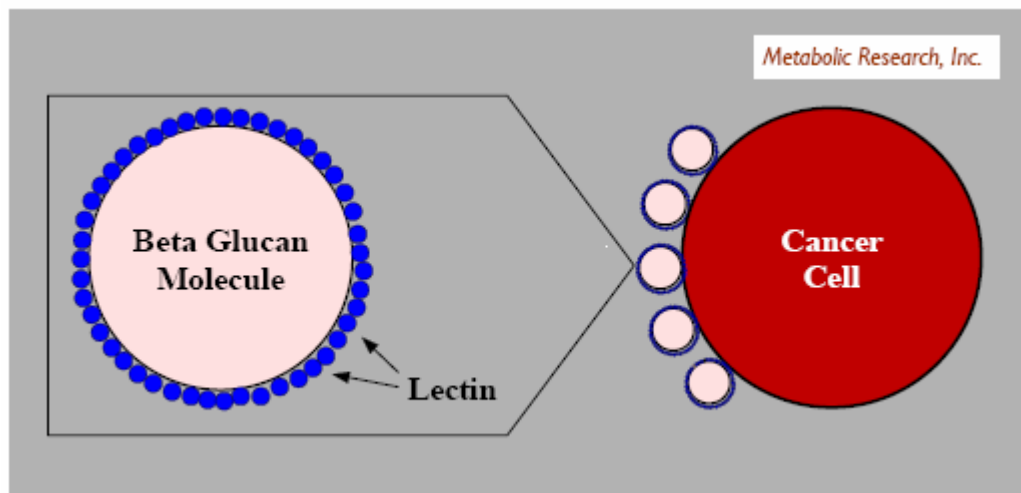
The **cancer-fighting lectin** is a glycoprotein substance of plant origin **capable of specific recognition of and binding to carbohydrate moieties of complex glycoconjugates on cancer cells without altering the structure of the glycosyl ligands**. These lectins can bind to sugar moieties in cancer cell walls or membranes and thereby change the physiology of the membrane to cause agglutination, apoptosis (cell suicide) or other biochemical changes in the cell. The **beta glucan** component, on the other hand, **stimulates the body's immune system** to target and kill the cancerous cells. The result is the ability to cure certain types of cancers or alternatively, to prevent metastasis and contain the cancer from spreading. With the help of MRI's beta glucan/lectin combination natural drug, certain types of cancers might ultimately be treated as a chronic ailment instead of a fatal disease. The product has the unusual properties of being naturally immunostimulatory against cancer, capable of binding to 80% to 90% of all cancer cells and non-toxic to normal cells.

The product utilizes the natural properties of beta glucan and lectin phytochemicals to identify, bind with and kill cancer cells and repair damaged cells in the body.

A lectin can be defined as a protein decipher of glycode which specifically binds or cross-links carbohydrates. In more basic terms, it is a naturally occurring protein found in plants, viruses, microorganisms and animals that share the common property of binding or cross-linking to specific sugar structures. **One such sugar structure commonly bound by lectins is a glycoconjugate found only on cancer cells**. Lectin from the common mushroom **Agaricus Blazei Murril** as well as several other **medicinal mushrooms** has **potent antiproliferative effect on human epithelial cancer cells** without any apparent cytotoxicity (Lu-Gang Yu, J.Biol Chem 1999). This property confers to it an important therapeutic potential as an antineoplastic agent.

MRI believes this **natural lectin can be produced rather inexpensively in large quantities and by utilizing the company's novel metabolic processes of naturally occurring non-vascular organisms**. The **lectin produced is naturally resistant to heat and digestion** and can be detected in active form in feces. Its use as food can be considered equally important as a drug that treats intestinal cancer development. This lectin has demonstrated the ability to bind to the membranes of cancer cells, deprive the cell of its nuclear uptake sequence, stop proliferation and essentially starve the cell to death.

The product contains unique polysaccharide/beta glucan combinations that produce simultaneous immunostimulatory and antigen binding capability. This is done through the twin processes of binding of polysaccharide carbohydrates to fusion polypeptides of the repeating amino acids of lectin hemagglutinin on T-antigen exclusively expressed on tumor cells, and the beta-glucan stimulated up regulation of incompetent CR3 receptor on the tumor cell. T and Tn antigens are specific glycoprotein autoimmunogenic pancreatic carcinoma antigens. These antigens may also be found in neoplastic blood cells (and on LTV-II infected T lymphocytes).



In most tumors T and Tn glycoprotein antigens, (whose epitopes have been synthesized) are uncovered and immunoreactive. In all other tissues T and Tn antigens are masked and therefore, not accessible to the immune system; thus carcinomas have antigens that can be recognized as foreign by the patient's immune system. The product addresses these antigens and is therefore potentially a cure for cancer. In order to specifically identify and kill cancer cells, the product must be constructed to maximize the properties of both the lectin and the beta glucan.

The diagram on the left illustrates the general composition of the product.

The product's **composition allows it to circulate throughout the body until the lectin identifies and binds with an antigen group of or a specific antigen receptor of the cancer cell.** Upon binding with identified cancer cell, the **lectin and the beta glucan independently work to accomplish cell killing.** The lectin blocks the nuclear localization and uptake sequence and stops proliferation. The beta glucan stimulates the activity of white blood cells (T-cells and Natural Killer [NK] cells) to destroy the cancer cell and phagocytes to remove the damaged cells in the vicinity. Thus the beta glucan and lectin combination has the potential to produce the closest thing to a cancer cure to date. The result would be the ability to cure certain cancers (certainly those 80% to 90% bearing the T-antigen) or alternatively, to contain the cancer in situ and prevent metastasis, treating those cancers not cured as a chronic ailment instead of a fatal disease.

## INDUSTRY & COMPETITION

This subsection is devoted some basic background information regarding Arthritis & Cancer and some competing methods of treatments and therapeutic drugs used today in the healthcare industry.

### Background on Arthritis

Arthritis is an inflammatory condition of the joints caused by excessive expression of the cells of an enzyme called cyclooxygenase-2. Arthritis isn't just one disease. It is actually a complex disorder that comprised more than a hundred distinct conditions and can affect people at any stage of life. Two of the most **common forms are osteoarthritis and rheumatoid arthritis**. They have very different causes, risk factors and effects on the body, yet they often share a common symptom – persistent joint pain.

Osteoarthritis is by far the most common type of arthritis, and the percentage of people who have it grows higher with age. An **estimated 12.1 percent of the U.S. population (nearly 21 million Americans) age 25 and older has osteoarthritis**. Although osteoarthritis is more common in older people, younger people can develop it – usually as a result of a joint injury, a joint malformation, or a genetic defect in joint cartilage. Both men and women have the disease. Before age 45, more men than women have osteoarthritis; after age 45, it is more common in women. It is also more likely to occur in people who are overweight and in those with jobs that stress particular joints. As the population ages, the number of people with osteoarthritis will only grow. **By 2030, 20 percent of Americans – about 72 million people – will have passed their 65th birthday and will be at high risk for the disease.**

Various common forms of arthritis include:

- ❑ **Osteoarthritis**, a degenerative joint disease in which the cartilage that covers the ends of bones in the joint deteriorates, causing pain and loss of movement as bone begins to rub against bone. It is the most prevalent form of arthritis.
- ❑ **Rheumatoid arthritis**, an autoimmune disease in which the joint lining becomes inflamed as part of the body's immune system activity. Rheumatoid arthritis is one of the most serious and disabling types, affecting mostly women.
- ❑ **Gout**, which affects mostly men. It is usually the result of a defect in body chemistry. This painful condition most often attacks small joints, especially the big toe. Fortunately, gout almost always can be completely controlled with medication and changes in diet.
- ❑ **Ankylosing spondylitis**, a type of arthritis that affects the spine. As a result of inflammation, the bones of the spine grow together.
- ❑ **Juvenile arthritis**, a general term for all types of arthritis that occur in children. Children may develop juvenile rheumatoid arthritis or childhood forms of lupus, ankylosing spondylitis or other types of arthritis.
- ❑ **Systemic lupus erythematosus (lupus)**, a serious disorder that can inflame and damage joints and other connective tissues throughout the body.
- ❑ **Scleroderma**, a disease of the body's connective tissue that causes a thickening and hardening of the skin.
- ❑ **Fibromyalgia**, in which widespread pain affects the muscles and attachments to the bone. It affects mostly women.

According to the Center of Disease Control, **arthritis is the leading cause of disability** in the United States. The CDC has found that each year, arthritis impacts the United States with 9,500 deaths and 750,000 hospitalizations. 49 million people have a self-reported, doctor-diagnosed arthritis, and for 8 million of them, arthritis limits their everyday activities such as walking, dressing and bathing. The **total cost for the economy is estimated to be \$128 billion**, or which **\$51 billion is spent on medical costs** alone.

The number of Americans with arthritis or chronic joint symptoms has steadily increased from 37.9 million in 1990 to 48 million in 2007 (nearly 1 in 5 adults). Younger people get osteoarthritis from joint injuries, but osteoarthritis most often occurs in older people.

Arthritis and other rheumatic conditions are among the most common chronic diseases, affecting 70 million U.S. adults in 2001, and comprise the leading cause of disability among U.S. adults. Arthritis prevalence increases with age, affecting approximately 60% of the U.S. population over 65 years old. As a result of better identification and treatment of other chronic diseases and lower mortality from infectious diseases, **U.S. adults are living longer, and the U.S. population is aging**. For this reason, the **number of persons living with nonfatal but disabling conditions such as arthritis or chronic joint symptoms (CJS) might be increasing**. To estimate the projected future burden of arthritis or CJS among persons of 65 years or older, CDC applied data from the 2001 **Behavioral Risk Factor Surveillance System (BRFSS)** to projected national population data for 2005—2030. If **arthritis prevalence rates remain stable**, the **number of affected persons over 65 years will nearly double by 2030**.

Today **21 million Americans** live with **osteoarthritis** with an estimated **annual economic cost of \$65 billion**. Nearly 3 million of these patients are between the ages of 40 and 65. For the 850,000 of these patients that have activity limiting arthritis and have failed medical management, total hip replacement is not a viable option for the following reason –since these patients are young and more likely to lead active life they will most definitely need a revision surgery in the next 15-20 yrs. A revision surgery is associated with significant complications and demonstrating efficacy. At the risk of bankrupting the entire healthcare system, new therapeutic options and dietary approaches are critical to ameliorate the unquestionable enormous cost of surgical interventions.

There are no successful cures for osteoarthritis and rheumatoid arthritis, other than surgical replacement of hips and knees.

**Doctors prescribe medicine to eliminate or reduce pain and to improve functioning.** Doctors consider a number of factors when choosing medicine for their patients with osteoarthritis. These include the intensity of pain, potential side effects of the medication, medical history (other health problems that exist or the patient is at risk for), and other medications being taken.

The following types of medicine are commonly used in treating osteoarthritis:

- ❑ **Acetaminophen:** A medication commonly used to relieve pain, acetaminophen (for example, Tylenol) is available without a prescription. It is often the first medication doctors recommend for osteoarthritis patients because of its safety relative to some other drugs and its effectiveness against pain.
- ❑ **NSAIDs** (nonsteroidal anti-inflammatory drugs): A large class of medications useful against both pain and inflammation, NSAIDs are staples in arthritis treatment. A number of NSAIDs – ibuprofen (Advil, Motrin), naproxen sodium (Aleve) and ketoprofen (Orudis, Oruvail) – are available over the counter. More than a dozen others, including a subclass of NSAIDs called COX-2 inhibitors, are available only with a prescription. All NSAIDs work similarly: by blocking substances called prostaglandins that contribute to inflammation and pain. However, each NSAID is a different chemical, and each has a slightly different effect on the body. NSAIDs can cause stomach irritation or, less often, they can affect kidney function. The longer a person uses NSAIDs, the more likely he or she is to have side effects, ranging from mild to serious. Many other drugs cannot be taken when a patient is being treated with NSAIDs because NSAIDs alter the way the body uses or eliminates these other drugs. NSAID's are often COX-2 inhibitors. They selectively block the enzyme COX-2 (cyclooxygenase-2). Blocking this enzyme impedes the production of the chemical messengers called prostaglandins that cause the pain and swelling of arthritis inflammation.

The U.S Food and Drug Administration has warned that long-term use of NSAIDs, or use by people who have , may increase the chance of a heart attack or stroke. In fact, the best selling arthritis drugs, Vioxx and Celebrex, have come with deadly side effects. Vioxx was pulled out of the market after more than 50,000 people allegedly died after taking it. And, Pfizer has announced that Celebrex raises the risk of heart attack when taken in high dosages.

Doctors may also prescribe several other medicine for osteoarthritis:

- ❑ **Topical pain-relieving creams, rubs, and sprays:** These products, which are applied directly to the skin over painful joints, contain ingredients that work in one of three different ways: by stimulating the nerve endings to distract the brain's attention from the joint pain; by depleting the amount of a neurotransmitter called substance P that sends pain messages to the brain; or by blocking chemicals called prostaglandins that cause pain and inflammation. Examples of topical medications are Zostrix, Icy Hot, Therapeutic Mineral Ice, Aspercreme, and Ben Gay.

- ❑ **Tramadol (Ultram):** A prescription pain reliever that is sometimes prescribed when over-the-counter medications don't provide sufficient relief. It carries risks that don't exist with acetaminophen and NSAIDs, including the potential for addiction.
- ❑ **Mild narcotic painkillers:** Medications containing narcotic analgesics such as codeine or hydrocodone are often effective against osteoarthritis pain. But because of concerns about the potential for physical and psychological dependence on these drugs, doctors generally reserve them for short-term use.
- ❑ **Corticosteroids:** Corticosteroids are powerful anti-inflammatory hormones made naturally in the body or man-made for use as medicine. They may be injected into the affected joints to temporarily relieve pain. This is a short-term measure, generally not recommended for more than two to four treatments per year. Oral corticosteroids are not routinely used to treat osteoarthritis. They are occasionally used for inflammatory flares.
- ❑ **Hyaluronic acid substitutes:** Sometimes called viscosupplements, these products are designed to replace a normal component of the joint involved in joint lubrication and nutrition. Depending on the particular product the doctor prescribes, it will be given in a series of three to five injections. These products are approved only for osteoarthritis of the knee.

### Background on Cancer

Because of its high incidence and mortality rate, **cancer ranks high on the list of the world's deadliest and costliest diseases.** Around the world, **only cardiovascular disease ranks higher than cancer as a cause of death.** The World Health Organization (WHO) estimates that **25 million people have cancer in Japan, Europe and North America** with an additional 10.1 million cases diagnosed worldwide each year. **By 2020, the WHO estimates that number will grow to 15 million new cases every year.**

The patterns of cancer incidence around the world vary in the economic developing versus developed world. In **developing** countries, **cancers of the mouth, pharynx, larynx and esophagus,** and of the **stomach, liver and cervix** are most prevalent. **Developed** countries tend to have higher rates of **colon and rectal cancer,** as well as hormone-related cancers including cancer of the **female breast, the endometrium and the prostate.** **Lung cancer,** the primary cause being tobacco, is now the **leading cause of cancer worldwide.**

Cancer is a **group of diseases characterized by uncontrolled growth and spread of abnormal cells.** If the spread is not controlled, it can result in death. Cancer is caused by both external factors (tobacco, chemicals, radiation and infectious organisms) and internal factors (inherited mutations, hormones, immune conditions, and mutations that occur from metabolism). These causal factors may act together or in sequence to initiate or promote carcinogenesis. Ten or more years often pass between exposure to external factors and detectable cancer. **Cancer is treated by surgery, radiation, chemotherapy, hormonal therapy and immunotherapy.**

Anyone can develop cancer. Since the risk of being diagnosed with cancer increases as people age, most cases occur in adults who are middle-aged or older. **About 76% of all cancers are diagnosed in persons 55 and older.** About 1.4 million new cancer cases were diagnosed in 2006. This doesn't include carcinoma in situ (non-invasive cancer) of any site except urinary bladder, and doesn't include basal and squamous cell skin cancers. The National Institute of Health estimated **overall costs for cancer in 2005 at \$210 billion: \$74 billion for direct medical costs,** \$17.5 billion for indirect morbidity costs and \$118.4 billion for cost of lost productivity due to premature death.

According to the U.S. Food and Drug Administration, there are **currently more than 150 cancer drugs in the market.** Some of them are highly specific, such as Prokinex which is used to treat metastatic melanoma, whereas others treat multiple cancers, such as Taxol for certain ovarian, colon and breast cancers. The **overall oncology drug market is estimated to be \$40 billion annually in the U.S. alone.** And, the **worldwide cancer drug market is now more than \$100 billion.** Even niche drugs can generate billions of dollars in annual sales. For example, on February 7th, 2007, Roche announced that the sales of its breast cancer drug Herceptin jumped 81% last year to \$3.2 billion, and its blood cancer treatment MabThera posted a 15% increase in sales to \$3.9 billion.

### GOVERNMENT REGULATION

According to the consulting firm **Bain and Company,** the **average cost of developing a single new drug is \$1.7 billion.** The development and the FDA approval process can easily take up to 12 years, without certainty that the synthetic drug is ever going to be approved.

Since Metabolic Research's products are **all-natural and non-synthetic, they are exempt from the FDA approval process** as it related to the approval for pharmaceutical drugs. This means that upon developing an effective natural drug, MRI's products can be immediately sold as nutraceutical products. The company believes its proprietary method of growing drugs has the potential of revolutionizing the pharmaceutical industry by being able to partner with mother nature to formulate non-toxic and non-synthetic pharmaceutical-grade natural drugs and bring them to market faster and at a lower cost.

*See Appendix A-I for Analyst Certification and Important Disclosures.*

In addition to selling its products as nutraceuticals, the company intends to explore the pharmaceutical development and FDA clinical trials as well. Under the **Dietary Supplement Health and Education Act of 1994 (DSHEA)**, dietary supplements are regulated like food. Unlike new drugs, dietary supplements don't generally have to go through review by the Food and Drug Administration for safety and efficacy or be "approved" before they can be marketed. However, manufacturers must provide pre-market notice and evidence of safety for any supplements they plan to sell that contain dietary ingredients that were not on the market before DSHEA was passed.

### U.S. Food & Drug Administration (FDA)

The FDA evaluates the safety of dietary supplements after they are on the market primarily through research and adverse event monitoring. Those who market and make dietary supplements are responsible for ensuring that any claims are substantiated with adequate evidence, and they cannot claim that the dietary supplements will treat or cure any disease. As such MRI will not make any medical claims. It will counter this constraint by aggressively submitting and publishing its clinical results in peer-review journals the results will likely be referenced in scientific presentations and symposia. As the company's products accumulate more and more scientific data MRI will **present such data to FDA in order to work out allowable claims permitted under the revised Health Supplement Amendment.**

### U.S. Federal Trade Commission (FTC)

The role of the Federal Trade Commission, which enforces laws outlawing unfair or deceptive acts or practices, is to ensure that consumers get accurate information about dietary supplements so that they can make informed decisions about these products. The FTC and the FDA work together under a long-standing liaison agreement governing the division of responsibilities between the two agencies. As applied to dietary supplements, the FDA has primary responsibility for claims on product labeling, including packaging, inserts, and other promotional materials distributed at the point of sale. The FTC has primary responsibility for claims in advertising, including print and broadcast ads, infomercials, catalogs, and similar direct marketing materials. Because of their shared jurisdiction, the two agencies work closely to ensure that their enforcement efforts are consistent to the fullest extent feasible.

## FINANCIAL STATEMENTS

The renamed company is a fully reporting company and readers can view its recently filed Form 10-QSB containing financials for Datastand Technologies Inc. filed with SEC on December 22, 2006 for the period ending September 30, 2006. The Company has its fiscal year-end on December 31. Most recent results for the first 9 months of FY2006 were un-audited. The financial statements are prepared in conformity with accounting principles generally accepted in the United States of America applicable to a going concern, which contemplates the realization of assets and liquidation of liabilities in the normal course of business. We believe past financial statements contain little relevance with respect to the present nature and business activities of the new enterprise. Interested readers are directed to: <http://yahoo.brand.edgar-online.com/default.aspx?cik=1081369>.

The Company's future revenues will consist of **license fees related to the licensing of its all-natural non-synthetic drug technology**. Currently, there is no license agreement(s) yet for its metabolic processes. Due to the costs involved in manufacturing and marketing, Metabolic Research plans to license its anti arthritic and anti cancer proprietary drug technology to third parties. Metabolic Research, Inc. **intends to generate revenues in three ways**. 1) **Metabolic Research will team up with nutraceutical companies with strong existing marketing channels**, and market its natural drugs either under its own brand name, or under the partnering company's brand name through a private label agreement; 2) Metabolic Research will **partner with large pharmaceutical and biotechnology companies**, giving those companies **access to its proprietary metabolic, i.e. "drug growing" processes**; and 3) Metabolic Research may consider **selling or licensing its intellectual property** to major biotechnology or drug development companies.

We believe an **independent appraisal of Metabolic Research's intellectual property at a future date can be one of the most valuable metrics** to provide guidance to existing and prospective investors of the attractiveness of the Company's shares vis-à-vis the **current market capitalization** of approximately **\$6.7 million**.

### Liquidity and Capital Resources

Metabolic Research does not have any traditional financing arrangements such as bank lines of credit and existing liquidity is considered to be low. Pro-forma projections **provide for start-up capital of \$300,000 that will allow cash on hand levels to rise to \$251,380 during the first month of operation**. To date Metabolic Research has been able to finance its operations through the private sale of its common stock and from borrowings from private lenders. Metabolic Research plans to continue to obtain the capital needed for its operations through these financial arrangements.

There can be no assurance that Metabolic Research will be successful in obtaining any additional capital as the need arises.

*See Appendix A-I for Analyst Certification and Important Disclosures.*

Management is currently seeking additional financing through the sale of equity and from borrowings from private lenders to cover its operating expenses and conduct its R&D and future clinical work. Metabolic Research will need additional capital until it is able to generate significant revenues from licensing its technology or from other sources. Metabolic Research expects to **obtain additional capital through the private sale of its common stock or from borrowings from private lenders or financial institutions**. From an operations standpoint, the most significant capital requirements of Metabolic Research are general and administrative expenses and research and development.

General and administrative expenses and R & D, exclusive of depreciation, amortization and other expenses not requiring the use of cash **is projected to be \$683,174 for the first year of operation**. Personnel expenditure comprises the largest portion of total annual expenses and is expected to be \$380,073. Marketing expense is seen to be \$85,500 with SG&A expenses projected at \$217,600 for the first year. The Company has pro-forma realized revenues (gross profit after cost of goods sold) in the first 12 months of operation of \$846,433, all of which results in pro forma projected net income before taxes of \$163,259. Total Research & Development spending during the first year of operation is expected to be \$300,000.

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**Other noteworthy financial and per share statistics are listed in the table found on page 1 of this report.**

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## **RISK FACTORS /CONCERNS**

The business model, and longer-term consistency of revenue and income potential, remain uncertain and are not yet proven. The company is **dependent on the successful development of its natural metabolic process intellectual property and the licensing of this potential technology** to develop safe and highly effective naturally produced pharmaceutical-grade anti-cancer, anti-inflammatory, anti-infective and anti-viral substances to fight a broad range of diseases. Due to the costs involved in manufacturing and marketing, Metabolic Research **plans to license** its processes and technologies to third parties, typically large pharmaceutical firms and hence it will be highly dependent on further closure of licensing agreements with new partners to enable the company to develop its technology and derive commercial benefit from its novel new procedures and will also be highly dependent on forming partnerships with nutraceutical companies with well established sales channels to distribute its products.

Failure to develop these potential new effective natural pharmaceuticals to treat inflammatory diseases, arthritis and/or cancer, to completion or commercialize and achieve sufficient sales of the new drug product(s), either on its own or in collaboration with other pharmaceutical and nutraceutical companies or the inability to fund future operations from either revenue or the issuance of additional equity, will have an adverse effect on the Company. Metabolic Research is dependent on the successful culmination of successful R&D efforts, licensing partnerships and effective marketing and distribution of its products and failure to develop such products from patents, and to achieve market penetration will have a significant and negative effect on its ability to continue operations. The most recent audited financial statements of its predecessor contained a **going concern qualification** from its auditors.

Metabolic Research business development is substantially dependent on the expertise of its management team and scientific team, the loss of which could materially adversely affect future anticipated results. The company is still considered to be a **development stage company** and generated little revenue and has a scant financial history. Even though future products of Metabolic Research are exempt from FDA review and approval it will still need to **adhere to various regulatory requirements enforced by the FDA and FTC** as discussed in the Government Regulations section on Page 9 and 10.

The company to date has not successfully commercialized any of its products and we cannot be certain that they will be able to start generating revenues from these products, or that these potential products will prove to be effective and will produce the intended effects to alleviate pain of arthritis patients and be effective in treatment if cancer. Even if effective, there may be **factors beyond the control of the company that may impede the acceptance of this product by practitioners, patients and the medical community**.

**A number of companies in the drug delivery, biotechnology and pharmaceutical industries have suffered significant setbacks in clinical trials, testing and R&D efforts even after showing promising results in earlier studies or trials**. Metabolic Research cannot give assurances that favorable results in any trial/study will mean that favorable results will ultimately be obtained in future animal and clinical studies with respect to arthritis and cancer. Similarly, there is no assurance that the U.S. Food and Drug Administration (FDA) and other regulatory agencies in countries where MRI's technology and pharmaceuticals may be sold or licensed, achieve such pharmaceutical approval for its potential products. **The FDA may make new rulings in future which mandate a suspension or a recall of production or sales of products** sold under Metabolic Research license (due to negative side-effects reported or any other valid reason), and result in Metabolic Research losing such licensing revenue and incurring expenses for a period until the company is in compliance with the regulations specified by the FDA or other regulatory body.

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All trials and studies, as well as the manufacturing and marketing of its potential product, are subject to extensive, costly and rigorous regulation by various governmental authorities in the United States and other countries. The process of obtaining required approvals from the FDA and other regulatory authorities **often takes many years, is expensive and can vary significantly based on the type, complexity and novelty of the potential product.** Therefore the company may be forced to deplete its financial resources pursuant of such approvals in cases where the company is marketing and selling a treatment that do not qualify as nutraceutical and therefore not exclusively regulated Under the **Dietary Supplement Health and Education Act of 1994 (DSHEA).**

**The company may not be able to generate or obtain sufficient funds to operate its business, which could harm results, and force the company to curtail or cease planned operations.** Most recent financials statements alert to the fact that liquidity is insufficient to support the expansion, research and development plan(s) of Metabolic Research. There can be no assurance the company will be successful in its effort to secure additional financing (which is expected to be approximately \$300,000) for the R&D work that lie ahead in the coming year.

Trading in the shares will continue to be subject to major fluctuations for the foreseeable future. The stock is thinly traded at prices around \$1.00 and selling of small positions could have a negative impact on the share price in absence of sufficient liquidity. The reverse is true if one or more large investors decide to acquire a block of Metabolic Research shares that would result in demand outstripping supply and result in an upward squeeze in the price given the low liquidity and daily trading volume. As of February 20, 2007, the Company had 8,138,125 outstanding shares of common stock.

**We caution that historical volume activity on Metabolic Research has been noticeably light, and we are unable to predict the direction of trading volumes over the coming months.** Major dilution of common stock can occur if company issues large blocks of common stock or convertible debt is converted or warrants are exercised into common stock, that can negatively impact on the value of its shares. NASD and SEC Regulations covering rules on Penny Stocks apply for Metabolic Research.

Further details and a more elaborate discussion of risk factors can be found in its future SEC filings of Metabolic Research Inc. submitted to the Commission, particularly its 8-K and 10-QSB filings.

## MANAGEMENT & SCIENTIFIC TEAM

### Nick Montesano – Chief Executive Officer

Nick Montesano is currently Chief Executive Officer of Metabolic Research, Inc. Prior to serving as Metabolic's CEO, Mr. Montesano was co-founder of Datastand Technologies, Inc., a publicly traded technology company that developed Internet software and distributed financial data using various formats. Datastand was the former name of Metabolic Research, Inc. Mr. Montesano served as Datastand's Chief Operating Officer from August 1999 where he played a key role in developing Datastand's business-to-business database licensing products. He was named CEO in December 2003 and served in that capacity until January 2007. Mr. Montesano was co-founder and director of CMN Consultants, an advocacy firm formed to resolve workplace accident disputes from 1993 to 1999. At CMN, Mr. Montesano was responsible for business development including sales and marketing. He was successful in assembling a sales team and implementing a marketing strategy, which made CMN a leader in its field.

### Dr. David P. Summers, D.Sc., Ph.D. – Chief Operating Officer

Dr. Summers is the Chief Operating Officer of Metabolic Research Inc. Dr. Summers has founded and managed three public biomedical companies in the past. Dr. Summers has developed several pharmaceutical drugs, medical devices, and nutraceutical products. He has performed cutting-edge research in the area of angiogenesis (the growth of new tissues) and formulated a drug that re-grows heart tissue (in pre-clinical FDA trials). He has also developed a new drug called Liprostin™, (in final human FDA trials) which can potentially improve quality of life for the 10 to 12 million Americans who suffer from the painful and debilitating effects of peripheral arterial occlusive disease (PAOD). Dr. Summers is also the designer of one of the best-selling non-steroidal nutraceutical product for bodybuilders today, Endothil-CR©, sold in all GNC stores and many other stores around the world.

### C. David Brown – Chief Financial Officer

C. David Brown is CFO of Metabolic Research, Inc. With 32 years of experience in the financial and banking administration, due diligence in appraisals of loan portfolios, auditing skills and proficiency in compliance standards and regulations along with extensive experience rendering credit decisions in a multiplicity of industries, Mr. Brown brings a wealth of financial expertise to the company. A graduate of BBA, Finance, University of Houston, Texas, and a Graduate in National Commercial Lending from University of Oklahoma, Mr. Brown has enhanced his knowledge consistently over the years with numerous career training including that of the American Institute of Banking, the Federal Government Audit Training Institute and Institute of Internal Auditors.

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**SCIENTIFIC ADVISORY BOARD****Dr. David P. Summers, D.Sc., Ph.D.**

Dr. Summers has founded and managed three public biomedical companies in the past. Dr. Summers has developed several pharmaceutical drugs, medical devices, and nutraceutical products. He has performed cutting-edge research in the area of angiogenesis (the growth of new tissues) and formulated a drug that re-grows heart tissue (in pre-clinical FDA trials). He has also developed a new drug called Liprostin™, (in final human FDA trials) which can potentially improve quality of life for the 10 to 12 million Americans who suffer from the painful and debilitating effects of peripheral arterial occlusive disease (PAOD). Dr. Summers is also the designer of one of the best-selling non-steroidal nutraceutical product for bodybuilders today, Endothil-CR©, sold in all GNC stores and many other stores around the world.

**Dr. Jason Cheng, M.D., Ph.D.**

Jason Cheng is a Division Chief for the Division of Radiation Oncology at the National Taiwan University Hospital of Taipei, Taiwan, and Assistant Professor at the National Taiwan University College of Medicine in Taipei, Taiwan. He is a recipient of twelve research grants for his work in oncology research.

**Dr. S.N. Chen, Ph.D.**

Dr. Chen is a Professor and Research Scientist at the National Taiwan University. He has done more than 20 years of research on Beta Glucan, and has received Taiwan's Distinguished Research Award five times in the past ten years. He is the inventor of an alternative avian flu therapy and the advanced bioection process for fungal spore separation and purification.

**Dr. Robert Shorr, Ph.D.**

Dr. Shorr is a scientist and entrepreneur with more than 100 inventions. He has published 150+ technical articles. Dr. Shorr is also a CEO for Cornerstone Pharmaceuticals – a partnership for biotechnology development with State University of New York.

**INVESTMENT THESIS AND RECOMMENDATION**

**Our analysis suggests that Metabolic Research Inc. is an interesting speculative play among micro-cap companies offering exposure to the investor on groundbreaking R&D work that holds promise of revolutionary potent new all-natural anti arthritis and anti-cancer compounds to help patients suffering from these diseases or conditions. Metabolic Research, Inc. (MRI) is a biotechnology company developing a new form of pharmaceutical-grade non-synthetic pharmaceuticals aimed to safely and effectively treat arthritis, cancer, and metabolic and inflammatory diseases. MRI's proprietary process is based on "growing" drugs by using natural metabolic processes of plants or fungi rather than chemical synthesis used by traditional pharmaceutical companies. The upside potential of the stock is therefore significant given the size of the market capitalization of Metabolic Research in the context of the monetary value of even a small percentage of the either the cancer drug market and/or the market for anti arthritics.**

According to the World Health Organization, more than 10 million people are diagnosed with cancer every year, and it is estimated that there will be 15 million new cases every year by 2020. According to the U.S. Food and Drug Administration, there are currently more than 150 cancer drugs in the market. The overall oncology drug market is estimated to be \$40 billion annually in the U.S. alone. And, the worldwide cancer drug market is now more than \$100 billion. There are over 8 million cancer patients in North America, with approximately 1 million more people developing cancer each year. Over one third of the population will develop cancer at some point during their life and over one-half a million people die from cancer each year. The new incidences of cancer, along with the maintenance of persons living with cancer, continue to increase the demand for cancer drugs and cancer diagnostics on a large scale. As far as arthritis is concerned the CDC [Center of Disease Control] ) estimates that the total annual cost for the US economy from all people suffering from all of the conditions of this disorder are estimated to be \$128 billion, of which \$51 billion is spent on medical costs alone.

The company's research in metabolic pharmaceuticals is in its initial phases, and preliminary research suggests this process could be used to develop safe and highly effective naturally produced pharmaceutical-grade anti-cancer, anti-inflammatory, anti-infective and anti-viral substances to fight a broad range of diseases.

Metabolic Research, Inc. has recently acquired a license for North America to a method that describes how various fungal products in their natural state could be induced to uptake the proper exogenous food materials into their metabolic processes. These processes that MRI owns rights to are compatible to any fungal species. Through metabolization of these products, fungi could then produce a vast array of metabolic end-products with pharmaceutical-grade healing properties.

A breakthrough discovery using fungi, plant, or animal sources to produce anti-inflammatory and analgesic products to both treat and cure inflammatory disease include two Provisional Patent applications. The first invention teaches the use of cyclooxygenase-2 (COX-2) inhibitors, which are the most useful products, discovered to date for down regulating, or blocking the arthritic-producing enzyme COX-2. The invention described above relies upon an entirely different and natural occurring hormone to reduce or block COX-2 induced inflammation than the active substances in COX-2 inhibiting drugs that have been pulled off the market (Celebrex & Vioxx) due to dangerous side-effects.

To be more precise the process extracts certain poly unsaturated fatty acids (PUFAs) found in abundance in the Agaricus Blazei Murrill (ABI) mushroom (and others) which produce the biological production of prostaglandin E-1 (PGE-1) and E-3 (PGE-3), and then blocks the production of Prostaglandin E-2 (PGE-2), the initiator of COX-2. The second invention combines the above with methods and process for the extraction of certain lectins such as sodium pyroglutamate to reduce the formation of angiogenesis in and around the inflamed joints and tissues. Angiogenesis, i.e., the induction of new blood vessels from existing vasculature, is a crucial event in the formation and maintenance of the pannus tissue in rheumatoid arthritis (RA). This form of arthritis is characterized by the destruction of peripheral joints in which the cartilage and bone are destroyed by proliferative synovitis. This condition is characterized by infiltration of inflammatory cells and formation of new blood vessels.

This suggests that inhibition of angiogenesis (anti angiogenesis) may play an important role in the treatment of both Osteo- and Rheumatoid arthritis. In particular, inhibition and/or disruption of new blood vessels can not only prevent delivery of nutrients to the inflammatory site, but can also lead to vessel regression, hence reversal of the disease. The hemagglutinins in the ABI mushroom have repeatedly demonstrated anti angiogenesis and reducing the blood supply to tumors in cancer patients. These two important functions are combined with a natural stem-cell recruiter who mobilizes de novo progenitor stem cells from the bone marrow to aggregate and replicate in and around bone/cartilage contact points with new collagen and fascia to replace worn cartilage and joint tissues.

By feeding the spores certain nutrients, MRI is able to increase the metabolic processing of the nutrient to produce a special unsaturated fatty acid, which is then used to supply a special 20-carbon polyunsaturated fatty acid, which produces prostaglandin E-1 in the body. The mushroom fungi produce a precise replication of the pre-designed engineered compound. MRI's anti-arthritis drug will include anti-angiogenic lectins to block new blood vessel growth found in rheumatoid arthritis. Should the company's conclusions be accurate, this design will create the most potent natural anti-inflammatory drug available.

The National Cancer Institute estimates the overall annual costs for cancer in the U.S. at \$104 billion with \$35 billion in direct medical costs and the remainder in productivity and mortality-related costs. Approximately one half of the direct costs are related to the treatment of breast, lung and prostate cancers. On a global basis, costs associated with cancer related illnesses are estimated at more than \$150 billion. These figures serve to illustrate the size and scope of the potential opportunity that exists for the metabolic cancer pharmaceutical that Metabolic Research is developing.

The rising cost of healthcare has created a demand for cost effective techniques in the management of cancer and therefore, there is an increased emphasis on people looking at products available in the nutraceutical market as ways to take preventive action to lower their risk of being diagnosed with cancer. In the medium to long term the Company's plan extends to developing a natural Cancer Drug that can lead to market share gains in the oncology market. Such a secondary product will broaden its scope of products that can complement sales of its anti arthritic drug and decrease the dependence of revenues on the arthritis market. The company also intends to acquire an additional license agreement for a non-synthetic cancer-fighting product, a natural beta glucan/lectin combination drug, from the same party that developed the anti-inflammatory application. To this end the company is finalizing a strategic alliance to co-develop and market a cancer-fighting product.

The financial risk involved in investing in a young research and developing company is typically high and should be considered by investors. In this case the risks are tied to the efficacy of Metabolic Research's strategy to license its procedures and metabolic pharmaceuticals to large pharmaceuticals and/or enter the nutraceutical market through lucrative partnerships with nutraceutical companies with strong existing marketing channels, and market its natural drugs either under its own brand name, or under the partnering company's brand name through a private label agreement.

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Secondly Metabolic Research will partner with large pharmaceutical and biotechnology companies, giving those companies access to its proprietary metabolic, i.e. "drug growing" processes; and lastly Metabolic Research may consider selling or licensing its intellectual property to major biotechnology or drug development companies. However, any licensee of Metabolic Research may not be successful in obtaining additional clearances or approvals from any regulatory authority with respect to Metabolic Research's technology/methods or metabolic pharmaceuticals. The lack of regulatory approval for Metabolic Research's products will prevent the sale of these products. Delays in obtaining regulatory approval or the failure to obtain regulatory approval in one or more countries may have a material adverse impact upon Metabolic Research's. Regulatory compliance and research and development costs associated with developmental work imply that Metabolic Research will have a negative cash flow from operations for the foreseeable future. There are other risks associated with penetrating the market with this new novel therapeutics, which may not gain acceptance in the medical industry as a viable, effective arthritis or cancer drug therapy alternative.

Negative financial effects and negative cashflow as a result of one or more of such factors can compound over time and result in full cash burn of all capital raised without deriving the intended economic benefit, sales or intellectual property that holds value for shareholders. Readers should understand that there can be no assurance that the company will be able to fast-track its intended path towards development and commercialization of this metabolic process and metabolic pharmaceutical technologies will flow through directly to the top and or bottom line to build a consistent longer term profitable track record that will build shareholder value.

We therefore only recommend investors that have a high tolerance for risk that are able and willing to forfeit either most or all of their capital in search for extraordinary returns, to consider investing in the shares. Also, in our view investors willing to commit capital to Metabolic Research should do so with absolute minimum 2 year investment horizon, but preferably longer, to allow ample opportunity for growth to emerge until broader price discovery can materialize within the investment community that will allow the value behind the current novel patents and intellectual property to be unlocked once licensing agreements are closed and completed and the company can advance its drive towards commercialization of its IP following more clinical trail data and evidence that supports current claims that its R&D work can lead to products that treat arthritis and cancerous conditions.

Economic benefit becomes the predominant intermediate term objective for the company and shareholders if its present R&D work and future animal studies and clinical trails continue to produce positive results. Short term we expect some volatility in the price-action of MTBR shares to occur as the stock establishes a trading range. Once company releases news of licensing or distribution deals struck or licensing revenues generated from products entering the market with respect to agreements and or it provides positive updates of meaningful progress in its R&D efforts, it should transpire as a positive catalyst for the stock.

In the near term a major risk factor of delays in receipt of additional funding to the count of at least \$300,000 for its 2007 R&D Plan, may hinder further improvement in the rating of the shares until adequate funding is secured that will satisfy concerns that may be present, or resurface in the investor community. We believe that this may act as a short-term headwind in the absence of other positive news.

We are unable to use traditional methods based on historic data to make a valuation call on the security at this early stage in the company's life cycle, but we have relied on some revenue projections for year1 and year 2, following commercial launch of its products taken from pro-forma financial data, and some peer comparatives and margin assumptions to derive a 'fair value' of what Metabolic Research may be realistically worth. Despite the risk associated with drug research and development, we know from other biotechnology cases that similar young biotechnology companies are assigned values for its intellectual property, and that those values typically fluctuate wildly on the back of press releases about progress or lack thereof of clinical trial data etc.

Our screening shows that names in the biotech industry that have entered a company life cycle phase where they are able to report positive EPS, and also involved in cancer and or arthritis research commanding historic PE multiples averaging near 30x and Price-to-Sales multiples can reach from as low as 3.1x to 7 or 8x revenues. PE multiples assigned to fast growing companies in the nutraceutical space is also in this vicinity which is at a premium to the overall market PE of around 17x for S&P 500 index.

We have consulted the pro-forma revenue, expenses and profit figures for year 1 of operation of the company and have made certain assumptions regarding revenue possibilities following year 1. These forecasts for FY2007 and FY2008 are shown in the table on page 1 of this report. Assuming the monthly gross sales of \$275,000 at the end of year 1 is achievable and remains stable throughout FY2008, we arrived at revenue and net income forecasts for the FY2008 for Metabolic Research. These numbers together with net operating margins (%) and earnings per share (EPS) estimates are provided on the table found on the following page (SEE TABLE below).

	EPS Forecast	Revenue Estimate	Net Income Estimate	Net Oper Margin %	Forward PE multiple	EPS Growth	Forward Price	Discount Rate (k)	Present Value
		(\$million)	(\$million)						
FY 2007	0.013	1.098	0.106	9.7%	30.0	NA	0.38	14.8%	
FY 2008	0.047	3.600	0.398	11.1%	30.0	275%	1.41	14.8%	1.233
<b>TOTAL</b>									<b>1.2325</b>
<b>Assumptions</b>		<b>Beta</b>	<b>2.80</b>	<b>R<sub>m</sub></b>	<b>8.0%</b>				
<b><math>k=R_f+(R_m-R_f)*Beta</math></b>		<b>R<sub>f</sub></b>	<b>4.25%</b>	<b>k</b>	<b>14.8%</b>				

Using these numbers in conjunction with a forward PE methodology, where we apply a PE multiple of 30x to our EPS forecast for FY2008, and thereafter discounting at the required rate of return (k) which is a function of the risk-free rate and market rate of return, together with the stock's beta measure, to obtain present values for the stock price, and ultimately arrive at a valuation framework for Metabolic Research.

For FY2007 we have calculated an EPS estimate of +1.3c and for FY2008 we estimate EPS to be closer to +4.7c. Given these calculations and our bottom up analysis, which is also qualitative in nature, we set a 12-month target price for the security of \$1.75. Our 12-month target price implies a market capitalization of \$14.6 million (on 8.4 million shares outstanding), representing a price to sales multiple of 2.9x our FY2008 revenue projection of \$3.6 million. This price to sales multiple is not unduly demanding in light of its life-cycle, its industry peers and rate of revenue growth to transpire in FY2008 and we believe that this revenue projection for FY2007 of \$1.09 million and \$3.6 million for FY2008 is certainly attainable, given the potential pervasive applicability of its metabolic process technology. MRI's anti-arthritis drug will include anti-angiogenic lectins to block new blood vessel growth found in rheumatoid arthritis. Should the company's conclusions be accurate, this design will create the most potent natural anti-inflammatory drug available.

Since Metabolic Research's products are all-natural and non-synthetic, they are exempt from the FDA approval process as it related to the approval for pharmaceutical drugs. This means that upon developing an effective natural drug, MRI's products can be immediately sold as nutraceutical products which unlocks early licensing and revenue opportunities to help generate cashflow for this company, while it continues R&D efforts and consider FDA approval for consideration in the pharmaceutical drug market at a more advance point in its life cycle. The company believes its proprietary method of growing drugs has the potential of revolutionizing the pharmaceutical industry by being able to partner with mother nature to formulate non-toxic and non-synthetic pharmaceutical-grade natural drugs and bring them to market faster and at a lower cost. When taking into account all of the factors in this report, the risk associated with a developmental stage biotechnology company such as Metabolic Research and relative rating to its peers, we initiate coverage on Metabolic Research with a SPECULATIVE POSITIVE rating under the stated assumptions.

**DISCLAIMER: METABOLIC RESEARCH INC. DOES NOT AGREE, NOR DISAGREE WITH THE PROJECTIONS AND THE TIME FRAMES DESCRIBED IN THIS DOCUMENT.**

*Risk to our recommendation include amongst other, failure of the company to obtain approval to market products utilizing its products and processes, failure of R&D work and clinical trials and/or studies on animals to advance its present findings of effectiveness and reach its primary endpoints, failure to attract further large companies willing to enter into licensing agreements for Metabolic Research technology, a slowdown or disruption in its R&D plans due to other regulatory and legislative issues that serve to push out or hinder R&D efforts, unfavorable terms with research partners or loss of scientific team members, new or additional competition or availability for alternative cancer and arthritis natural drug and chemically induced drug alternatives in the markets where MRI competes and conducts its business, unforeseen regulatory changes impacting adversely on biotechnology efforts with regards to arthritis and cancer research and development, and/or low acceptance of its products by the medical community. Also, any inability to obtain necessary financing from capital markets to proceed with the R&D plans, the loss of intellectual property and patents, which protect its competitive position, the loss of key personnel and or scientists and/or major share dilution that can occur, if large quantities of shares are issued to extinguish debt or paid for services, inability to obtain positive results from further studies, any product liability lawsuits as a result of actual or perceived negative side effects of its metabolic pharmaceuticals are some additional factors that will counteract price appreciation potential or cause shares to decline in value.*

*We would caution that given the size of the company (micro-cap) and risks involved, overall we advise private client positions be limited below 5% of the client's total portfolio size.*

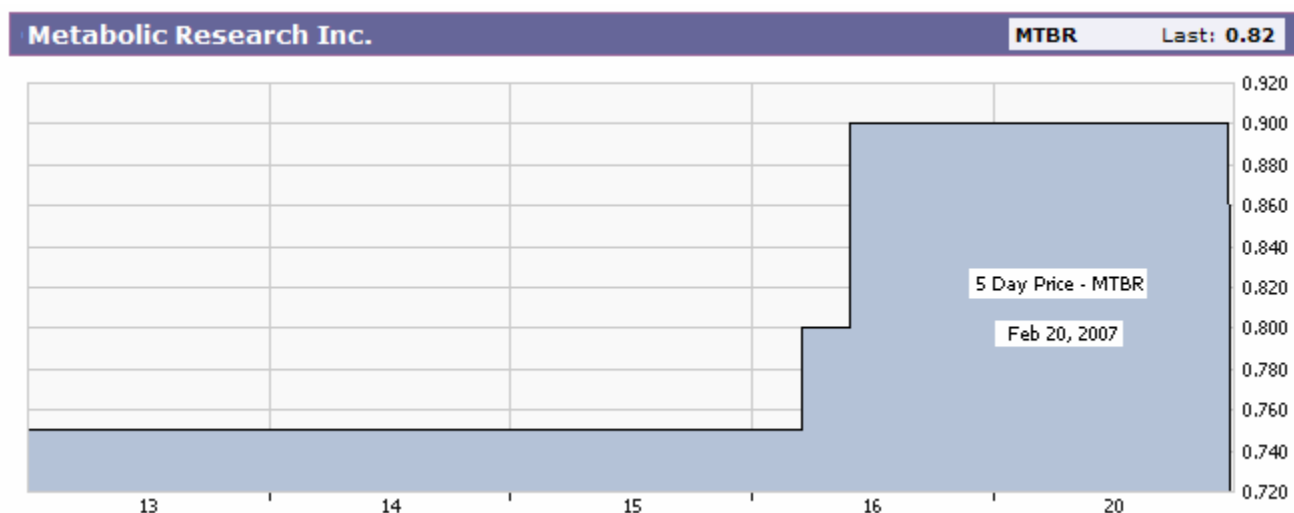
*See Appendix A-I for Analyst Certification and Important Disclosures.*

Our rating system, for stocks we rate, is divided into four main classifications: **Buy**, **Positive**, **Neutral**, and **Sell/Avoid**. Our Buy rating is divided into sub classifications by our analysts to reflect the degree to which the analyst believes the shares are undervalued in relation to the market and its peers, and the degree of financial risk represented by an investment in the shares. These Buy sub classifications include: **SPECULATIVE BUY** and **SPECULATIVE STRONG BUY**. The analyst will comment in the company reports on any of the perceived risk factors underlying the assigned rating.

Classification	Sub Classification	Description
BUY RATINGS	Speculative Strong Buy	The current price of the company reflects a substantial discount from the market and from the valuation accorded its peers. The analyst believes the stock at current levels represents a compelling opportunity for capital gains over the time period to its target price. <b>Speculative</b> means the company does have significant financial or other risks, while the <b>Strong Buy</b> category means <b>at least 100% gain indicated over 12 months</b> between current and analyst target price. <b>Speculative Buy</b> means <b>at least a 50% appreciation</b> indicated over 12 months between current and analysts' target price.
	Speculative Buy	
POSITIVE	Speculative Positive	The current price reflects a discount from the market, and from its peers. The analyst believes the stock at current levels will provide an opportunity for capital gains over the period of its target price. <b>Speculative</b> means the company does have significant financial or other risks. <b>Speculative Positive</b> means <b>0% up to 50% appreciation indicated over 12 months</b> between current and analysts' target price.
NEUTRAL	Neutral Rating	The analyst is <b>unable to assign a speculative buy/positive rating</b> due to a number of specified factors noted in the report. These include the stock being fairly valued relative to its peers and the market, or the company may have risks that make it potentially unsuitable for investment. Finally, there may be actions or financings the company must accomplish before being considered for raising the investment rating or <b>alternatively the stock has little or no recent financial disclosure or delinquent in SEC filings.</b>
SELL/AVOID	Avoid	The analyst believes that the risks of investment in the company are too severe, and an investment in the company has a substantial probability for loss of all invested capital.
	Sell	We believe that the Company may be fairly valued or overvalued based on its current price, and that an investment in the company should produce below market returns.

The table below contains a summary of ratings awarded by **TRI-STATE CAPITAL** to companies in its coverage universe during the past 18 months:

RATINGS Universe Distribution		SPECULATIVE NEUTRAL	SPECULATIVE POSITIVE	SPECULATIVE BUY	SPECULATIVE STRONG BUY
Percentage:	100%	16%	40%	21%	23%
<b>TOTAL COMPANIES</b>	<b>57</b>	<b>9</b>	<b>23</b>	<b>12</b>	<b>13</b>



## ANALYST CERTIFICATIONS

## APPENDIX A-1

The research analyst, who upon request wrote this report, certifies that the views expressed in this research report, accurately reflects his personal view about the subject company. The analyst also certifies that he does not own or have any beneficial interest in shares of the covered company, also that no part of his compensation was, is or will be directly or indirectly related to the specific recommendation or view expressed in this report. Tri-State Capital received \$6,000 in compensation for work on the subject company from a third party.

Based on the facts that were provided, the industry trends present and sources of information used to produce this report, it is my best opinion and reflection of what the companys rating and share appreciation potential could be once research coverage is widely adopted. Investors are urged to consider this report as only a single factor in making their investment decision. Information, opinions or recommendations contained in this report or research note are submitted solely for advisory and information purposes and we also do not accept any obligation to provide updates to this report in future.

Clients of the analyst firm collectively own less than 1 percent of total shares outstanding of the issuer. For securities recommended in this report the firm is not a market maker, but may from time to time provide bids and offers and may act as principal in connection with such transactions to facilitate trading liquidity or execution. The firm of the analyst does not actively seek to do investment banking business with the company covered in this research report. This independent analysis and judgment relies on material supplied by the subject company and other sources, such as SEC filings believed to be reliable. The analyst that prepared this report cannot guarantee the information contained herein for accuracy or completeness.

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