

## Sunshine Biopharma, Inc. (OTCBB: SBFM) – Targeting the Challenge of Multidrug Resistance in Breast and Lung Cancer by Developing Adva-27a

New York, New York – July 30, 2012 - Investorideas.com, an investor research portal specializing in sector research including biotech and pharma stocks, issues CFA commentary by Patrick J. Murphy of Murphy Analytics LLC on Sunshine Biopharma Inc. ([OTCBB: SBFM](http://otcbb.com/quote/SBFM)) and its lead anti-cancer compound, Adva-27a.

### Select Stock Trading Data

Recent Stock Price: \$0.34  
Shares Outstanding: 48.7 million  
Float: 13.9 million  
Recent Market Cap: \$16.8 million  
52 Week Range: \$0.12 - \$1.45  
Exchange: OTCBB  
Ticker: SBFM  
URL: <http://www.sunshinebiopharma.com>

Data sourced from Yahoo! Finance; otcbb.com; Company filings

Sunshine Biopharma, Inc. (SBFM) is focused on the research, development and commercialization of drugs for the treatment of various forms of cancer. SBFM reports that the preclinical studies for the Company's lead compound, Adva-27a, a multi-purpose anti-tumor compound, were successfully completed in late 2011. SBFM is now continuing the clinical development of Adva-27a by conducting the next sequence of steps comprised of GMP manufacturing, IND-enabling studies, regulatory filing and Phase I clinical trials. SBFM plans to conduct Phase I clinical trials for Adva-27a at the Jewish General Hospital, Montreal, Canada, one of McGill University's Hospital Centers.

The planned indication will be multidrug resistant breast cancer as SBFM reports that Adva-27a has shown remarkably strong cytotoxic activity against this type of cancer. In addition, on June 26, 2012, SBFM announced the completion of another cytotoxicity study in which Adva-27a was found to be significantly more effective at killing multidrug resistant small-cell lung cancer (SCLC) cells than etoposide, a drug commonly used currently for treating SCLC.

SBFM has licensed its technology on an exclusive basis from Advanomics Corporation and is planning to initiate its own research and development program as soon as practicable

An article in nature biotechnology<sup>i</sup> summarizes the challenge multidrug resistance creates for developing effective treatments:

*"Multidrug resistance, the principal mechanism by which many cancers develop resistance to chemotherapy drugs, is a major factor in the failure of many forms of chemotherapy. It affects patients with a variety of blood cancers and solid tumors, including breast, ovarian, lung, and lower gastrointestinal tract cancers. Tumors usually consist of mixed populations of malignant cells, some of which are drug-sensitive while others are drug-resistant. Chemotherapy kills drug-sensitive cells, but leaves behind a higher proportion of drug-resistant cells. As the tumor begins to grow again, chemotherapy may fail because the remaining tumor cells are now resistant."*

As explained in an article<sup>ii</sup> published by the National Institutes of Health (NIH), this cellular response to toxins in the environment is critical for our survival and has evolved over time:

*“Toxins in the environment are a major threat to many living organisms. Once internalized, toxic compounds must be removed for the organisms to survive. Therefore, humans have developed, inherited and perfected ways to reduce the effect of xenobiotics.<sup>iii</sup> At the cellular level, the cell membrane acts as a physical barrier to prevent compounds from entering the cell. However, because some compounds can diffuse through the cell membrane, alternative protective methods have evolved. One of the most important defense mechanisms is to pump xenobiotics out of the cells. Thus, drug transporters are commonly found in the cell membranes of many organisms, from bacteria to mammals, and are responsible for cell protection. However, the existence of these drug transporters often hinders the use of compounds used to treat diseases because they are substrates of these efflux pumps either by affecting the pharmacokinetics of drugs in the body or by limiting accumulation in target cells such as cancer cells.”*

SBFM reports that Adva-27a can overcome two of these xenobiotic pumps - multidrug resistant transporter proteins MDR1 and MRP1, which facilitate multidrug resistance, and as the NIH article notes, MDR1 in particular has become the most studied gene in the field of multidrug resistance.

In terms of gauging the potential market opportunity for Adva-27a for use in the treatment of breast cancer, Roche's Herceptin® reached \$5.3 billion<sup>iv</sup> a year in sales in 2011. Herceptin® is approved for the treatment of early-stage breast cancer that is Human Epidermal growth factor Receptor 2-positive (HER2+), which the National Cancer Institute estimates represents only 15% - 20% of breast cancer patients.<sup>vi</sup> The American Cancer Society estimates<sup>vii</sup> that in the U.S. alone, there will be 229,060 new cases of breast cancer diagnosed in 2012, with 39,920 deaths from breast cancer during the year. Given that Herceptin® revenue grew by 9% in 2011 and has risen over 30% since 2006, it seems clear there is a very significant market opportunity for a drug that is effective for the non-HER2+ breast cancer population, which represents a significant majority of breast cancer patients.

As reference for the potential market opportunity for Adva-27a for treatment of small-cell lung cancer, the American Cancer Society estimates there will be 226,160 new cases of lung and bronchus cancer in the U.S. in 2012, with an estimated 160,340 deaths. The National Cancer Institute (NCI) estimates<sup>viii</sup> that small-cell lung cancer (SCLC) accounts for approximately 15% of bronchogenic carcinomas. While etoposide,<sup>ix</sup> now available as a generic, is used in combination with other medications to treat SCLC, the NCI addresses the challenge and urgency of developing a more effective treatment for SCLC, noting that:

*“Regardless of stage, the current prognosis for patients with SCLC is unsatisfactory despite improvements in diagnosis and therapy made during the past 25 years. Without treatment, SCLC has the most aggressive clinical course of any type of pulmonary tumor, with median survival from diagnosis of only 2 to 4 months.”*

*“For most patients with small cell lung cancer, current treatments do not cure the cancer. If lung cancer is found, patients should think about taking part in one of the many clinical trials being done to improve treatment. Clinical trials are taking place in most parts of the country for patients with all stages of small cell lung cancer.”*

In a recent interview, SBFM CFO Camile Sebaaly noted that the Company expects the first clinical trial of Adva-27a will be done on breast cancer volunteers at Jewish General Hospital. As the Company continues to do the work and raise the capital necessary to bring its drug to market, Mr. Sebaaly stated that the Company expects that if FDA approval is obtained, SBFM may have a similar sales profile to other important cancer drugs that have reached \$1 billion in sales within 2 years of FDA approval.

## **Patrick Murphy Bio:**

Patrick J. Murphy is the owner of Murphy Analytics LLC, a provider of sponsored research coverage on smallcap stocks. Mr. Murphy has nearly 20 years of capital markets experience providing institutional investment and transaction analysis across a range of asset classes including microcap equities, commercial real estate debt and equity, municipal derivatives and public finance, venture capital, fixed income, CMBS and mortgage REIT's. In addition to his work with Murphy Analytics, Mr. Murphy also serves as a consultant to a municipal derivatives advisory firm. Mr. Murphy is an alumnus of the University of Notre Dame (1991), with an undergraduate degree in Economics, and earned a Masters Degree in Finance from St. Louis University in 1997. Mr. Murphy is a CFA Charterholder and a member of the CFA Society of St. Louis.

## **Patrick Murphy Disclaimer:**

Readers are advised that the above article is solely for information purposes and should not to be construed as an offer to sell or the solicitation of an offer to buy any security. The views expressed herein are based upon the author's analysis of the issuer's public disclosures, and assumes both their accuracy and completeness. The opinions and statements included herein are based on sources (including the companies discussed and public sources) believed to be reliable and in good faith, but no representation or warranty, express or implied, is made as to their accuracy, completeness or correctness. The author has not independently verified the information contained herein. This information is not intended to be used as the sole basis of any investment decisions, nor should it be construed as advice designed to meet the investment needs of any particular investor. You should review a complete information package on all companies, which should include, but not be limited to, the Company's annual report, quarterly reports, press releases and all regulatory filings. The foregoing discussion contains statements which are based on current expectations, estimates and projections, and differences from such expectations, estimates and projections can be expected. The author, Patrick Murphy, was compensated \$510 by InvestorIdeas.com for writing this article. Murphy does not own shares of any of the companies mentioned in this article. Mr. Murphy's research firm, Murphy Analytics, may be engaged for the provision of a research report on the Company in the future.

---

<sup>i</sup> [http://www.nature.com/nbt/journal/v18/n10s/full/nbt1000\\_IT18.html](http://www.nature.com/nbt/journal/v18/n10s/full/nbt1000_IT18.html)

<sup>ii</sup> <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2810319/>

<sup>iii</sup> *Chemical substances that are foreign to the biological system. They include naturally occurring compounds, drugs, environmental agents, carcinogens, insecticides, etc.;*

<http://ghr.nlm.nih.gov/glossary=xenobiotics>

<sup>iv</sup> [http://www.roche.com/investors/annual\\_reports/annual\\_reports\\_2011.htm](http://www.roche.com/investors/annual_reports/annual_reports_2011.htm): Presentation Slides, # 145

<sup>v</sup> <http://www.herceptin.com/about/>

<sup>vi</sup> <http://www.cancer.gov/newscenter/qa/2008/alttoqa>

<sup>vii</sup> <http://www.cancer.org/acs/groups/content/@epidemiologysurveillance/documents/document/acspc-031941.pdf>

<sup>viii</sup> <http://www.cancer.gov/cancertopics/pdq/treatment/small-cell-lung/healthprofessional>;

<http://www.cancer.gov/cancertopics/pdq/treatment/small-cell-lung/Patient#Keypoint7>

<sup>ix</sup> <http://www.nlm.nih.gov/medlineplus/druginfo/meds/a684055.html>

## **About Sunshine Biopharma Inc. (OTCBB: SBFM):**

Sunshine Biopharma is a pharmaceutical company focused on the research, development and commercialization of drugs for the treatment of various forms of cancer. The Company's lead compound, Adva-27a targets aggressive forms of cancer.

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

## **About InvestorIdeas.com:**

InvestorIdeas.com is a leader in investor stock research by sector, including biotech and pharma stocks. Visit the biotech portal within Investor Ideas:

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

---

Follow Investorideas.com on Twitter <http://twitter.com/#!/Investorideas>  
Follow Investorideas.com on Facebook <http://www.facebook.com/Investorideas>

**[Sign up for the free investor news and biotech stock alerts](#)**

**Visit the SBFM profile <http://www.investorideas.com/CO/SBFM/>**

**Disclaimer/ Disclosure** : The Investorideas.com is a third party publisher of news and research. Our sites do not make recommendations, but offer information portals to research news, articles, stock lists and recent research. Nothing on our sites should be construed as an offer or solicitation to buy or sell products or securities. This site is currently compensated by featured companies, news submissions and online advertising. Disclosure: A third party on behalf of SBFM compensated Investorideas.com for news release publishing and distribution: one hundred thousand 144 shares for three months starting June 26<sup>th</sup>

Patrick Murphy was compensated five hundred dollars for the CFA commentary article

BC Residents and Investor Disclaimer : Effective September 15 2008 - all BC investors should review all OTC and Pink sheet listed companies for adherence in new disclosure filings and filing appropriate documents with Sedar. Read for more info: <http://www.bcsc.bc.ca/release.aspx?id=6894>

800-665-0411 - Source – [www.investorideas.com](http://www.investorideas.com)