

**SOLIGENIX, INC. (OTCBB: SNGX)**

**ORBEC® ADVANCES TO A CONFIRMATORY PHASE III TRIAL IN ACUTE GI GVHD; EXPECT IT TO BECOME THE FIRST NEW DRUG APPROVED FOR THIS UNMET MEDICAL NEED**

**Soligenix, Inc. (OTCBB: SNGX)** (formerly DOR BioPharma, Inc.) is a clinical stage biopharmaceutical company. SNGX's lead therapeutic is orBec®, a first-in-class oral beclomethasone dipropionate (local-acting corticosteroid) for the treatment and prevention of acute gastrointestinal graft-versus-host disease (GI GVHD), the treatment of chronic GI GVHD, and for the prevention of acute radiation enteritis in patients with cancer. Use of orBec® is expected to control the gastrointestinal inflammatory process of GVHD and minimize the need for systemic immunosuppressive drugs in order to improve the outcome of bone marrow and stem cell transplantation.

<b>Share Price (1/5/10)</b>	\$0.25
<b>52-Week Price Low / High</b>	\$0.04 – \$0.38
<b>Mkt. Capitalization (issued)</b>	\$47 MM
<b>Shares Outstanding (issued)</b>	185.5 MM
<b>12-month Target Price</b>	\$1.40
<b>Cash &amp; Equivalents (9/30/09)</b>	\$7.5 MM
<b>Fiscal Year Ends</b>	December 31st
<b>Website</b>	soligenix.com

**BioTherapeutic Pipeline:**

*Late stage:*

- orBec® Confirmatory Phase III Clinical Trial (Treatment of Acute GI GVHD) – Fast Track Designation
- orBec® Phase II Clinical Trial (Prevention of Acute GVHD), NIH Funded
- orBec® Phase II Clinical Trial (Chronic GI GVHD) – *To Be Initiated in 2010*

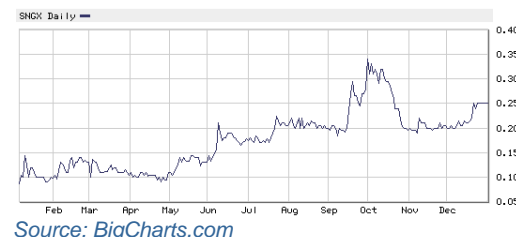
*Early stage:*

- SGX201 Phase I/II (Acute Radiation Enteritis) – Fast Track Designation, NIH Funded
- Lipid Polymer Micelle (LPM™) Oral Drug Delivery Technology

**BioDefense Pipeline:**

- RiVax™ Vaccine – Phase I (Ricin Toxin Exposure), NIH Funded
- BT-VACC™ Vaccine – Preclinical (Botulinum Toxin Exposure), NIH Funded
- SGX202 Therapeutic – Preclinical (Radiation Injury), NIH Funded

**12-Month Price Chart**



**We are updating coverage on Soligenix, Inc. (OTCBB: SNGX) with a BUY rating, and we are reiterating our 12-month price target of \$1.40 for SNGX shares for the following reasons:**

- ❑ **Confirmatory Phase III clinical trial progressing for orBec®, a first-in-class, oral, locally-acting drug for the treatment of acute GI GVHD, an unmet medical need; Phase II ongoing in prevention of acute GVHD – Phase II clinical trial completion targeted for 1H 2010; Confirmatory Phase III clinical trial completion targeted for 1H 2011;**
- ❑ **orBec® remains a relatively low-risk late-stage candidate; two randomized (Phase II and Phase III), double-blind, placebo-controlled trials have shown that orBec® prevents relapses of acute GI GVHD, and long-term mortality data shows significant improvement over placebo;**
- ❑ **We expect rapid uptake upon approval, especially because many of the leading centers are participants in the Phase III clinical trial and have previous direct experience with orBec®; and**
- ❑ **Sigma-Tau partnership yielding 35% royalty and \$9.4 million grant from the National Institute of Allergy and Infectious Diseases (NIAID) support program development.**

<b>CHRYSTYNA BEDRIJ</b> 212-509-9500 CBEDRIJ@GRIFFINSECURITIES.COM	<b>MARK MERRILL</b> 646-442-1441 MMERRILL@GRIFFINSECURITIES.COM	<b>KEITH A. MARKEY, PH.D.</b> 212-514-7914 KMARKEY@GRIFFINSECURITIES.COM
--	---	--

## INVESTMENT HIGHLIGHTS

- ❑ **RECRUITMENT UNDERWAY IN THE CONFIRMATORY PHASE III CLINICAL TRIAL OF ORBEC® TO TREAT GASTROINTESTINAL GRAFT-VERSUS-HOST DISEASE (GI GVHD).** Enrollment in the confirmatory Phase III clinical trial in acute GI GVHD began in October 2009, triggering a \$1 million milestone payment from North American commercial partner Sigma-Tau. The Phase III trial is expected to enroll approximately 166 patients and to be completed with clinical data available in 1H 2011. The primary endpoint is the treatment failure rate at day 80, a secondary endpoint successfully achieved in the first Phase III clinical trial ( $p=0.005$ ).<sup>1</sup> Special Protocol Assessment (SPA) with the FDA and similar EMEA agreement provide additional regulatory clarity. Notably, a positive confirmatory Phase III clinical trial would be sufficient to support a marketing authorization in the US and approval in all 27 European Union (EU) member states. Separately, a Phase II clinical trial supported by the National Institute of Health (NIH) is ongoing assessing orBec® in acute GVHD prevention. We maintain our belief that orBec represents a relatively low risk late-stage candidate. Two completed randomized (Phase II and Phase III), double-blind, placebo-controlled trials have shown that orBec® prevents relapses of acute GI GVHD, and long term mortality data shows significant improvement over placebo. SNGX has a high royalty (35%) partnership with Sigma-Tau in the North American market to support the launch of orBec® upon approval. The confirmatory Phase III clinical trial will support a complete response to its prior NDA submission for this potentially first-in-class, topically-active glucocorticoid.
- ❑ **ORBEC® OFFERS AN IMPROVED STEROIDAL TREATMENT IN A HIGHLY SPECIALIZED MARKET – LIKELY TO LEAD TO RAPID UPTAKE UPON APPROVAL.** SNGX is bringing to the market a new targeted steroid approach (not a new chemical entity) that is familiar to drug practitioners. orBec® is a topically-active steroid that targets the inflammation in the gut. This compares favorably to current steroidal treatment options, such as prednisone, that are systemic in nature. Additionally, its closest competitor has been stalled. **Osiris Therapeutics' (NasdaqGM: OSIR)** Prochymal, a stem cell preparation, did not achieve its primary endpoint in two Phase III clinical trials.<sup>2</sup> The market is also very focused with 16 of the main treatment centers in the U.S. accounting for approximately 60% of stem cell transplants. We expect uptake to be rapid upon approval, especially because many of the leading centers are participating in the Phase III clinical trial and have previous direct experience with orBec®.
- ❑ **ORBEC® MAY BE AN EFFECTIVE TREATMENT OPTION FOR OTHER GI DISORDERS – PHASE I/II CLINICAL TRIAL IN RADIATION ENTERITIS HAS BEEN INITIATED.** On December 21, 2009, SNGX announced the initiation of a Phase I/II clinical trial for SGX201, a time-release formulation of oral BDP, for the treatment of radiation enteritis.<sup>3</sup> The localized activity and effects of Oral BDP in treating gut inflammation in GI GVHD patients supports its potential utility in treating other GI diseases, including radiation enteritis and Crohn's disease. These indications alone represent opportunities in excess of \$500 million worldwide. Also, other organ transplant patients (stomach, intestine, liver) and other inflammatory conditions of the stomach, small bowel, and colon, such as IBS, and ulcerative colitis, represent other potential markets. SNGX received a \$500,000 Small Business Innovation Research (SBIR) grant from the National Institutes of Health (NIH) in September 2009 for the SGX201 program in radiation enteritis.<sup>4</sup> The grant will support the current Phase I/II clinical trial designed as a multicenter, open-label, sequential, dose-escalation trial that is expected to enroll approximately 36 patients.
- ❑ **STRENGTHENED BALANCE SHEET SUPPORTS PHASE III CLINICAL TRIALS OF ORBEC®.** SNGX raised \$4.4 million in September 2009 through an equity financing with partner Sigma-Tau and other institutional investors aimed at providing support for ongoing development programs.

<sup>1</sup> Soligenix, Inc. press release, "Soligenix Announces Initiation of its Confirmatory Phase III Clinical Trial of orBec® in Acute GI GVHD." October 15, 2009.

<sup>2</sup> Osiris Therapeutics, Inc. press release, "Osiris Therapeutics Announces Preliminary Results for Prochymal Phase III GvHD Trials." September 8, 2009.

<sup>3</sup> Soligenix, Inc. press release, "Soligenix Announces Initiation of a Phase I/II Clinical Trial of SGX201 for the Prevention of Acute Radiation Enteritis." December 21, 2009.

<sup>4</sup> Soligenix, Inc. press release, "Soligenix Announces NIH Grant Award to Support Phase I/II Clinical Trial of SGX201 in Radiation Enteritis." September 8, 2009.

- **\$9.4 MILLION GRANT FROM THE NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES (NIAID) SUPPORTS BIODEFENSE VACCINE PROGRAM.** SNGX's lead biodefense product in development is designed to protect against the lethal effects of exposure to ricin toxin (RiVax™). SNGX is the world leader in ricin toxin research, and its vaccine, RiVax™, has been shown to be well tolerated and immunogenic in a Phase I clinical trial in normal volunteers. The \$9.4 million NIAID grant will be used for formulation and manufacturing techniques to create vaccines that are stable at higher temperatures, allowing for easier storage and handling of completed vaccines.<sup>5</sup> Separately, SNGX announced in November 2009 that the Company has formed a consortium with academic and industry partners to develop thermostable vaccine technology that has the potential to move outside biodefense to other areas, such as infectious disease. As part of the initiative, SNGX entered an option agreement with the University of Colorado for vaccine heat-stability technology.<sup>6</sup> Additionally, Soligenix recently announced the publication of positive pre-clinical results in the January 2010 edition of *Infection and Immunity*, detailing the characteristics of several immunodominant regions of ricin A chain, the antigenic component of RiVax™.<sup>7</sup>
- **CORPORATE NAME CHANGE TO SOLIGENIX, INC. (OTCBB: SNGX).** DOR BioPharma, Inc. (OTCBB: DORB) officially changed its name to Soligenix, Inc. (OTCBB: SNGX).<sup>8</sup>
- **CURRENT DISCOUNTED CASH FLOW MODEL SUPPORTS PRICE TARGET OF \$1.40 PER SHARE.** We maintain our BUY rating and 12-month price target of \$1.40 for SNGX shares. Our target price at \$1.40 per share is based on sales projections for orBec in acute and chronic GI GVHD and SGX201 in radiation enteritis. We have currently not assigned value to oral BDP for indications in other GI areas, including radiation enteritis in colon or prostate cancer, Crohn's disease, other organ transplant patients (stomach, intestine, and liver) and other inflammatory conditions, which represent significant commercial opportunities and could add upside to our projections. We have also not assigned value to SNGX's Lipid Polymer Micelle (LPM™) Drug Delivery Technology or the BioDefense product candidates.

---

<sup>5</sup> Soligenix, Inc. press release, "Soligenix Announces \$9.4 Million NIH Grant Award to Develop Thermostable and Rapidly Acting Vaccines." September 21, 2009.

<sup>6</sup> Soligenix, Inc. press release, "Soligenix Forms Consortium to Develop Thermostable Technology to Advance RiVax™ and Other Rapidly Acting Vaccines." November 20, 2009.

<sup>7</sup> Soligenix, Inc. press release, "Soligenix Announces Publication of Positive Pre-Clinical Results with RiVax™, its Vaccine Against Ricin Toxin." December 28, 2009.

<sup>8</sup> Soligenix, Inc. press release, "DOR BioPharma Announces Corporate Name Change to Soligenix and Begins Trading Under New Ticker Symbol "SNGX". September 30, 2009.

## TABLE OF CONTENTS

2009 YEAR IN REVIEW .....	5
KEY EVENTS AND MILESTONES .....	5
ORBEC® (GRAFT-VERSUS-HOST DISEASE) .....	6
CONFIRMATORY PHASE III WITH SPA .....	6
PREVIOUS CLINICAL TRIAL RESULTS .....	7
SGX201 (RADIATION ENTERITIS) .....	8
ORAL BDP (OTHER APPLICATIONS) .....	9
LIPID POLYMER MICELLE (LPM) DELIVERY SYSTEM .....	9
BIODEFENSE .....	10
RIVAX™ .....	10
INVESTMENT CONCERNS AND RISKS .....	11
FINANCIAL FORECASTS & VALUATION .....	12
HISTORICAL BALANCE SHEET .....	12
REVENUE ASSUMPTIONS .....	13
INCOME STATEMENT .....	17
DISCOUNTED CASH FLOW (DCF) MODEL .....	18
DISCLOSURES .....	19

## 2009 YEAR IN REVIEW

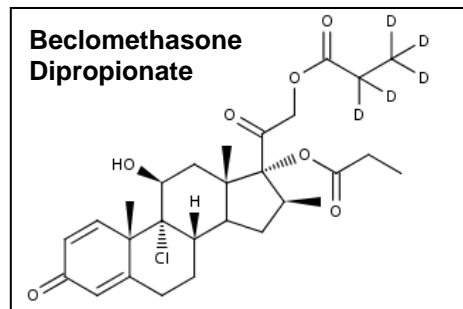
- √ **1Q 2009** – Received Special Protocol Assessment (SPA) clearance from the FDA to begin a confirmatory Phase III clinical trial of orBec® in treating acute GI GVHD
- √ **1Q 2009** – Obtained Fast Track designation for SGX201 in radiation enteritis
- √ **1Q 2009** – Completed \$30 million, 35% royalty-generating partnership with Sigma Tau for orBec® in North America
- √ **2Q 2009** – Received EMEA agreement on the design of confirmatory Phase III clinical trial of orBec® in GI GVHD
- √ **3Q 2009** – Received a \$9.4 million grant from the National Institute of Health (NIH) to support the development of the BioDefense vaccine programs
- √ **3Q 2009** – Completed a \$4.4 million private equity financing with partner Sigma Tau and institutional investors
- √ **3Q 2009** – Corporate name change to Soligenix, Inc. (OTCBB: SNGX)
- √ **4Q 2009** – Initiated the confirmatory Phase III clinical trial in orBec® in acute GI GVHD
- √ **4Q 2009** – Initiated Phase I/II clinical trial with SGX201 (active ingredient BDP) in radiation enteritis
- √ **4Q 2009** – Publication of positive pre-clinical results in the January 2010 edition of *Infection and Immunity* detailing the characteristics of several immunodominant regions of ricin A chain, the antigenic component of RiVax™

## KEY EVENTS AND MILESTONES

- **1H 2010** – Complete NIH grant supported Phase II clinical trial of orBec® for the prevention of acute GVHD
- **1H 2010** – Complete European partnership for orBec®
- **1H 2010** – Complete Phase Ib clinical trial for RiVax™
- **2H 2010** – Initiate Phase II clinical trial of orBec® in chronic GI GVHD
- **2H 2010** – Initiate Phase I PK clinical trial of LPM™ leuprolide
- **1H 2011** – Complete Phase I/II clinical trial with SGX201 in radiation enteritis
- **1H 2011** – Complete confirmatory Phase III clinical trial of orBec® in acute GI GVHD

## ORBEC® (GRAFT-VERSUS-HOST DISEASE)

orBec® (oral beclomethasone dipropionate), Soligenix's lead product candidate, is a potentially first-in-class locally-acting corticosteroid in Phase III development for the treatment of acute gastrointestinal graft-versus-host disease (GI GVHD) and Phase II development for the prevention of acute GVHD. GI GVHD is a serious condition that results from bone marrow and peripheral blood hematopoietic cell transplantation (HCT).



### CONFIRMATORY PHASE III WITH SPA

On October 15, 2009, Soligenix announced that enrollment had commenced in its confirmatory pivotal Phase III clinical trial for orBec® for the treatment of acute GI GVHD under the FDA's Special Protocol Assessment (SPA) procedure. The primary endpoint of the confirmatory pivotal Phase III trial will be to duplicate the achieved secondary endpoint from the first pivotal Phase III trial of treatment failure rate at day 80 (previous p-value 0.005). We believe that the likelihood for success in this trial is high due to the fact that SNGX is in essence seeking a replication of prior results. The key confirmatory trial design factors – endpoint, dosing, patient population and expected control group outcomes - have remained consistent with the prior Phase III.<sup>9</sup>

#### Confirmatory Phase III Trial Design Compared to Prior Phase III Trial

	Prior Phase 3	Confirmatory Phase 3
Number of sites	Multicenter	Multicenter
Number of patients	129	166
Patient population	Allogeneic transplant patients with Grade 2 GI GVHD	Same
Powering	80%	90%
Primary endpoint	Time to Treatment Failure Through Day 50	Treatment Failure Rate at Day 80 (p-value of 0.005 in prior Phase 3)
Delivered dose and frequency of dose	8 mg beclomethasone / 1mg BDP per tablet / 2 tablets 4 times per day / 50 days	Same
Design	2 Randomized groups: High dose prednisone for 10 days with rapid taper with 50 days on placebo or drug	Same

Source: Soligenix, Inc.

The double-blind, randomized, placebo-controlled, multi-center trial is expected to enroll 166 patients with data expected in the 1H 2011.

Since Soligenix had previously submitted a New Drug Application (NDA) for orBec® in the treatment of acute GI GVHD, the regulatory review timeframe with the FDA is expected to be six months after the NDA amendment with the new confirmatory Phase III trial data is submitted.

<sup>9</sup> Soligenix press release, "DOR BioPharma Receives SPA Clearance from the FDA to Begin Confirmatory Phase III Clinical Trial of orBec in GI GVHD." Jan. 5, 2009.

## PREVIOUS CLINICAL TRIAL RESULTS

Two completed randomized (Phase II and Phase III), double-blind, placebo-controlled trials have shown that orBec® prevents relapses of acute GI GVHD, and long term mortality data shows significant improvement over placebo. In the first Phase III trial, orBec® showed statistically significant results in the reduction of risk of treatment failure and mortality rates compared to placebo. Although statistical significance in the trial's primary endpoint of time to treatment failure through Day 50 was not achieved (p=0.1177), the secondary endpoint of time to treatment failure through day 80 was achieved with statistical significance (p=0.0226). orBec® also achieved statistical significance in other key secondary endpoints, such as the proportion of patients free of GVHD at Day 50 (p-value 0.05) and Day 80 (p-value 0.005). Treatment failure is defined as the worsening of the patients' underlying GVHD condition that requires rescue with systemic steroids, namely prednisone. Additionally, orBec® demonstrated a statistically significant improvement in the secondary endpoint of mortality through Day 200 post-transplant (p-value 0.0139) versus placebo, as well as demonstrating a statistically-significant improvement at one year post-randomization (p-value 0.043).<sup>10,11</sup>

### Prior Phase III Clinical Trial Results

Results	orBec® (n=62)	Placebo (n=67)	p-value
Time to Treatment Failure through Day 50 (primary endpoint)			0.1177
Treatment Failure Rate at Day 50	18 (31%)	30 (48%)	0.0515
Time to Treatment Failure through Day 80			0.0226
Treatment Failure Rate at Day 80 (new primary endpoint in confirmatory Phase III clinical trial)	22 (39%)	39 (65%)	0.0048
Mortality Rate at 200 Days Post-Transplant	5 (8%)	16 (24%)	0.0139

Source: Soligenix, Inc.

An earlier Phase II clinical trial met its primary and secondary endpoints with statistically significant results. The primary endpoint of a durable treatment response at day 30 was met with 22/31 (71%) acute GI GVHD patients receiving orBec® responding to treatment versus 12/29 (41%) patients on placebo (see table below). Treatment response was measured by whether or not patients were able to consume at least 70% of their estimated caloric intake. Long-term mortality results were also measured and compare favorably to placebo.

### orBec® Phase II Results

	Day 10	Day 30	Day 40
<b>orBec®</b>	22/31 (71%)	<b>22/31 (71%)</b>	16/31 (52%)
<b>Placebo</b>	16/29 (55%)	<b>12/29 (41%)</b>	5/29 (17%)
<b>P-value</b>	0.2	<b>0.02</b>	0.007

Source: Soligenix, Inc.

<sup>10</sup> Soligenix press release, "orBec Pivotal Phase 3 Clinical Trial Results Published in Journal *Blood*." Jan. 23, 2007.

<sup>11</sup> Hockenbery et al. A randomized, placebo-controlled trial of oral beclomethasone dipropionate as a prednisone-sparing therapy for gastrointestinal graft-versus-host disease. *Blood* (2007) 109(10): 4557-4563.

The following table shows mortality rates at 200 days post-transplant for orBec® versus placebo in both the Phase III and Phase II trials.<sup>12,13</sup>

**orBec®: 200 Days Post-Transplant Mortality Results**

	Phase III Trial		Phase II Trial	
	orBec®	Placebo	orBec®	Placebo
Number of patients randomized	62	67	31	29
Number (%) who died	5 (8%)	16 (24%)	3 (10%)	6 (21%)
Hazard ratio (95% confidence interval)	0.33 (0.12, 0.89)		0.47 (0.12, 1.87)	
Death with infection*	3 (5%)	9 (13%)	2 (6%)	5 (17%)
Death with relapse*	3 (5%)	9 (13%)	1 (3%)	4 (14%)

\*Some patients died with both infection and relapse of their underlying malignancy.

Source: Soligenix, Inc.

Relapse of the underlying hematologic malignancy contributed to the deaths of 9/67 patients (13.4%) on placebo versus 3/62 patients (4.8%) on orBec®. Acute or chronic GVHD was the cause of death in only 1/62 patients (1.6%) in the orBec® arm of the study versus 3/67 (4.5%) in the placebo arm. The safety profile of orBec® was comparable to placebo.<sup>14,15</sup>

In both the Phase II and the Phase III trials, orBec® improved mortality rates versus placebo in all major categories measured, including the number who died, the number who died due to infection, and the number who died due to relapse of underlying malignancy.

## SGX201 (RADIATION ENTERITIS)

SGX201 (oral beclomethasone dipropionate) is in development for the treatment of radiation enteritis, a condition resulting from radiation treatment in certain cancer patients and an unmet medical need. On January 6, 2009, Soligenix announced that the SGX201 program was awarded "Fast Track" designation from the FDA for radiation enteritis after its Investigational New Drug (IND) application was approved in December 2008. This important step ensures SGX201 should be given a priority review by the agency upon submission of an NDA.<sup>16</sup>

Soligenix received a \$500,000 Small Business Innovation Research (SBIR) grant from the National Institutes of Health (NIH) in September 2009 for the SGX201 program. The grant will support the upcoming Phase I/II clinical trial designed as a multicenter, open-label, sequential, dose-escalation trial that is expected to enroll 36 patients. This trial has initiated and is expected to complete in 1H 2011.

<sup>12</sup> Soligenix press release, "DOR BioPharma Reports Positive New Survival Findings from Previously Completed Phase II and III Clinical Trials of orBec®." Jan. 21, 2006.

<sup>13</sup> McDonald GB, Bouvier M, Hockenbery DM, Stern JM, Gooley T, Farrand A, Murakami C, Levine DS, Oral beclomethasone dipropionate for treatment of intestinal graft-versus-host disease: a randomized, controlled trial, *Gastroenterology* (1998); 115(1), 28-35

<sup>14</sup> Soligenix press release, "orBec® Pivotal Phase 3 Clinical Trial Results Published in Journal *Blood*." Jan. 23, 2007.

<sup>15</sup> Hockenbery et al. A randomized, placebo-controlled trial of oral beclomethasone dipropionate as a prednisone-sparing therapy for gastrointestinal graft-versus-host disease. *Blood* (2007) 109(10): 4557-4563.

<sup>16</sup> Soligenix press release, "DOR BioPharma Obtains Fast Track Designation for DOR201 in the Prevention of Acute Radiation Enteritis." Jan. 6, 2009.

## ORAL BDP (OTHER APPLICATIONS)

Due to its ease of administration and localized activity, beclomethasone dipropionate has the potential for use in numerous other gastrointestinal (GI) areas. Crohn's disease, one potentially treatable condition, represents a market opportunity in excess of \$500 million worldwide. Other potential applications for which beclomethasone dipropionate may prove effective include other organ transplant patients (stomach, intestine, liver) and other inflammatory conditions of stomach, small bowel, and colon, such as IBS and ulcerative colitis. These indications would represent other lucrative markets for this potent treatment. While we have not included these indications in our financial estimates at this time, we believe they provide significant upside to DOR BioPharma's valuation.

Pursuant to a recent publication in *Bone Marrow Transplantation* entitled "Influence of Oral Beclomethasone Dipropionate on Early Non-Infectious Pulmonary Outcomes after Allogeneic Hematopoietic Cell Transplantation: Results from Two Randomized Trials," orBec® was shown to decrease non-infectious inflammation and improve lung function in acute GI GVHD patients who received allogeneic HCT transplants. This publication could lead the way to the potential development of new applications of oral BDP in a number of pulmonary inflammatory disorders, such as asthma or interstitial lung diseases, having significant market opportunity beyond the GI area.<sup>17</sup>

## LIPID POLYMER MICELLE (LPM) DELIVERY SYSTEM

The LPM™ technology is a platform technology that uses reverse micelles stabilized by polymers. Reverse micelles are generally described as a lipid system and are similar to water-in-oil emulsions in that the hydrophilic lipid head groups are directed towards the micelle core, with the hydrophobic tails imbedded in the oil phase. This results in a drug delivery system that is a thermodynamically stable clear dispersion of the water-soluble drug in the lipid phase. But unlike water-in-oil systems, stabilized reverse micelles do not depend on the presence of other surfactants and are thermodynamically stable. In the LPM™ system, water-soluble drugs are contained in the water space in the core of the micelles and are protected against degradation.

---

<sup>17</sup> Chien, GW et al. Influence of Oral Beclomethasone Dipropionate on Early Non-Infectious Pulmonary Outcomes after Allogeneic Hematopoietic Cell Transplantation: Results from Two Randomized Trials. *Bone Marrow* (2009); advanced online publication.

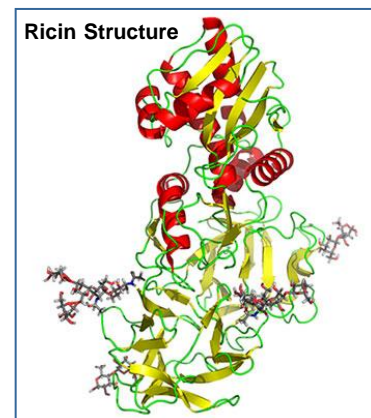
## BIODEFENSE

Through its BioDefense Division, Soligenix is developing biomedical countermeasures pursuant to the Project BioShield Act of 2004. Soligenix's lead biodefense product in development is a recombinant subunit vaccine called RiVax™ which is designed to protect against the lethal effects of exposure to ricin toxin. RiVax™ has been shown to be well tolerated and immunogenic in a Phase I clinical trial in normal volunteers. RiVax™ will also be the subject of a recent \$9.4 million NIH grant received by the Company supporting development of new heat stable vaccines. Additionally, positive pre-clinical results including details on the characteristics of several immunodominant regions of ricin A chain, the antigenic component of RiVax™, were recently published in the January 2010 edition of *Infection and Immunity*.

## RiVAX™

Soligenix is the world leader in ricin toxin vaccine research. RiVax™, the first ricin toxin vaccine to be tested in humans, is being developed pursuant to the Project BioShield Act of 2004. Ricin, a type 2 ribosome inactivating protein, is found in castor beans. It is poisonous if inhaled, injected, or ingested. As little as 500 micrograms can be deadly if inhaled or injected and treatment is not available within 36 to 72 hours following exposure. Ricin enters cells and inhibits protein synthesis, causing cell death and an inflammatory response that can lead to organ failure. While ricin is not a common threat, its relative ease of production and storage and severe toxicity make it a potential biological weapon of mass destruction according to the U.S. FBI.<sup>18,19,20</sup>

The RiVax™ program is being funded by the National Institute of Allergy and Infectious Disease (NIAID). Soligenix received a \$9.4 million NIAID grant in September 2009 that will be used for formulation and manufacture techniques to create vaccines that are stable at higher temperatures, allowing for easier storage and handling of completed vaccines. Separately, Soligenix announced in November 2009 that they have formed a consortium with academic and industry partners to develop thermostable vaccine technology. As part of the initiative, Soligenix executed its option with the University of Colorado for vaccine heat-stability technology.



<sup>18</sup> United States Center for Disease Control's National Institute for Occupational Safety and Health. *The Emergency Response Safety and Health Database* "Ricin" [www.cdc.gov](http://www.cdc.gov).

<sup>19</sup> Lord, MJ et al. Ricin Mechanisms of Cytotoxicity, *Toxicol Rev* (2003) 22(1): 53-64.

<sup>20</sup> United States Center for Disease Control, "Facts About Ricin" March 5, 2008, [www.cdc.gov](http://www.cdc.gov).

## INVESTMENT CONCERNS AND RISKS

For a complete description of risks and uncertainties related to Soligenix, Inc.'s business, see the "Risk Factors" section in Soligenix's SEC filings, which can be accessed directly from the SEC Edgar filings at [www.sec.gov](http://www.sec.gov). Potential risks include:

- ❑ **Stock risk and market risk:** There is a limited trading market for the Company's common stock. There can be no assurance that an active and liquid trading market will develop or, if developed, that it will be sustained, which could limit one's ability to buy or sell the Company's common stock at a desired price. Investors should also consider technical risks common to many small-cap or micro-cap stock investments, such as small float, risk of dilution, dependence upon key personnel, and the strength of competitors that may be larger and better capitalized.
- ❑ **New and rapidly changing field:** The pharmaceutical and biotechnological markets are rapidly evolving, and research and development are expected to continue at an accelerated pace with increased frequency. Other companies are also actively engaged in the development of therapies to directly or indirectly treat those disorders being pursued by Soligenix. These companies may have substantially greater research and development capabilities, as well as significantly greater marketing, financial, and human resources abilities than Soligenix.
- ❑ **Products still in development phases:** Although the Company intends to continue with clinical development of orBec® for gastrointestinal graft-versus-host disease and other pipeline candidates in various indications, the successful development of the Company's product candidates is uncertain. Product development costs and timelines can vary significantly for each product candidate and are difficult to accurately predict. In addition, products in development that appear to be promising may not reach commercialization for various reasons, including failure to achieve regulatory approvals, safety concerns, and/or the inability to be manufactured at a reasonable cost.
- ❑ **Funding requirements:** It is difficult to predict the Company's future capital requirements. The Company may need additional financing to continue funding the research and development of its products and to expand its business. There is no guarantee that it can secure the desired future capital or, if sufficient capital is secured, that current shareholders will not suffer significant dilution.
- ❑ **Regulatory risk:** Various statutes and regulations also govern or influence the manufacturing, safety, labeling, storage, record keeping and marketing of each product. The lengthy process of seeking approval and the subsequent compliance with applicable statutes and regulations require the expenditure of substantial resources. Any failure by us to obtain, or any delay in obtaining, regulatory approvals could materially adversely affect Soligenix's business. There is no guarantee that Soligenix's products will be approved by the U.S. Food and Drug Administration (FDA) or international regulatory bodies for marketing in the U.S. or abroad.
- ❑ **The Company may need to raise additional capital, which may not be available on terms acceptable to them, if at all:** As the Company continues to expand its research and development and sales and marketing activities, they may need to raise additional capital, which may not be available on terms acceptable to them, if at all. If the Company cannot raise necessary additional capital on acceptable terms, they may not be able to increase sales, develop or enhance their products and services, take advantage of future opportunities, or respond to competitive pressures or unanticipated requirements, any of which could cause their business to suffer.
- ❑ **Competitive risk:** The biotechnology industry is extremely competitive, mainly due to its large market potential. Many companies are developing products for the same therapeutic indications targeted by Soligenix. These companies may have substantially more resources than Soligenix, which could adversely affect the Company's position in the market place.

## FINANCIAL FORECASTS & VALUATION

The following assumptions refer to our revenue model, annual earnings model, and valuation analysis. The revenue estimates are for orBec® sales revenue in the US and Europe (excluding potential revenue, license fees, or royalties from the rest of the world) for the treatment and prevention of acute gastrointestinal graft-versus-host disease (GI GVHD) and the treatment of chronic GI GVHD and SGX201 sales revenue in the US and Europe (excluding potential revenue, license fees, or royalties from the rest of the world) for the treatment of radiation enteritis. We have not included potential upfront fees or milestone revenue from, nor expenses associated with, SNGX's other product candidates.

### HISTORICAL BALANCE SHEET

\$ in thousands

<b>ASSETS</b>	<b>9/30/2009</b>	<b>12/31/2008</b>
<b>Current Assets</b>		
Cash & equivalents	7,487	1,475
Grants receivable	762	278
Inventory, net	109	82
Prepaid expenses	163	87
Total Current Assets	\$ 8,522	\$ 1,923
Property & equipment	\$ 26	\$ 21
Intangible assets	1,432	1,419
Other	-	-
<b>Total Assets</b>	<b>\$ 9,979</b>	<b>\$ 3,363</b>
 <b>LIABILITIES</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 1,491	\$ 1,015
Accrued compensation	223	371
Total Current Liabilities	\$ 1,714	\$ 1,386
Long-term debt	\$ -	\$ -
Other	-	-
Total Long-Term Liabilities	\$ -	\$ -
 <b>Shareholders Equity</b>		
Common Stock, par value	\$ 186	\$ 119
Additional Paid-In Capital	115,988	104,176
Accumulated Deficit	(107,908)	(102,318)
Treasury Stock	-	-
Total Shareholders Equity	\$ 8,265	\$ 1,977
<b>Total liabilities &amp; equity</b>	<b>\$ 9,979</b>	<b>\$ 3,363</b>

## REVENUE ASSUMPTIONS

## orBec®: Acute GI GVHD - US

Year penetration starts	2011	Incidence	5000
Starting penetration rate	40%	Percent addressable	75%
Years between penetration start and peak	2	Market growth rate	5%
Peak penetration	70%	Price per patient per year	\$15,000
Duration of peak penetration in years	6	Treatment price growth	3%
Retention rate in decline years	90%	Royalty rate	35%
Stage of development	Phase III	Probability of commercialization	80%

- There are approximately 10,000 annual allogeneic stem cell transplant patients in the U.S. Approximately 50% of the patients develop acute GVHD within the first 100 days post-transplant, resulting in an incidence of 5,000. Assumes that the incidence is 2,000 in 2014 when orBec® begins to be used for GVHD prevention<sup>21,22,23</sup>;
- Approximately 75% of the GVHD patients will be eligible for orBec® as the preferred treatment method over existing treatment options, including methotrexate, cyclosporine, or prednisone;
- orBec® penetrates the market beginning in 2H 2011 at a price of \$15,000 per treatment cycle;
- The price per prescription grows at an annual rate of 3%;
- orBec® penetrates 10% of the addressable market in the 2011 partial launch year and reaches a peak penetration of 70% of the addressable market in 2013; and
- The issued U.S. orBec® patent expires in 2019. SNGX also has Orphan Drug Designation for orBec® for this indication.

## orBec®: Acute GI GVHD - EU

Year penetration starts	2012	Incidence	5000
Starting penetration rate	40%	Percent addressable	75%
Years between penetration start and peak	2	Market growth rate	5%
Peak penetration	70%	Price per patient per year	\$12,000
Duration of peak penetration in years	4	Treatment price growth	3%
Retention rate in decline years	90%	Royalty rate	0%
Stage of development	Phase III	Probability of commercialization	80%

- There are approximately 10,000 annual allogeneic stem cell transplant patients in Europe. Approximately 50% of the patients develop acute GVHD within the first 100 days post-transplant, resulting in an incidence of 5,000. Assumes that the incidence is 2,000 in 2014 on the approval of orBec® for GVHD prevention<sup>21,22,23</sup>;
- Approximately 75% of the GVHD patients will be eligible for orBec® as the preferred treatment method over existing treatment options, including methotrexate, cyclosporine, or prednisone;
- orBec® penetrates the market beginning in 2012 at a price of \$12,000 per treatment cycle;
- The price per prescription grows at an annual rate of 3%;
- orBec® penetrates 10% of the addressable market in the 2012 partial launch year and reaches a peak penetration of 70% of the addressable market in 2014; and

<sup>21</sup> Soligenix, Inc. Corporate Presentation, November 2009.

<sup>22</sup> MARTIN PJ, MCDONALD GB, SANDERS JE *et al.*: Increasingly frequent diagnosis of acute graft-versus-host disease after allogeneic hematopoietic cell transplantation. *Biol. Blood Marrow Transplant* (2004) 10: 320 -327.

<sup>23</sup> McDonald, GB: Oral beclomethasone dipropionate: a topically active corticosteroid for the treatment of gastrointestinal graft-versus-host disease following allogeneic hematopoietic cell transplantation. *Expert Opin Investig Drugs* (2007) 16(10): 1709-1724.

- Orphan Drug Designation provides protection until 2022.

#### orBec®: Acute GVHD Prevention - US

Year penetration starts	2013	Incidence	10000
Starting penetration rate	20%	Percent addressable	100%
Years between penetration start and peak	2	Market growth rate	5%
Peak penetration	70%	Price per patient per year	\$20,000
Duration of peak penetration in years	4	Treatment price growth	3%
Retention rate in decline years	95%	Royalty rate	35%
Stage of development	Phase II	Probability of commercialization	50%

- There are approximately 10,000 allogeneic stem cell transplant patients in the U.S. on an annual basis<sup>21</sup>;
- Approximately 100% of the allogeneic transplant GVHD patients will be eligible for orBec® administered proactively as a preventative measure against GVHD;
- orBec® penetrates the market beginning in 2H 2013 at a price of \$20,000 per treatment cycle;
- The price per prescription grows at an annual rate of 3%;
- orBec® penetrates 10% of the addressable market in 2013 partial launch year and reaches a peak penetration of 70% of the addressable market in 2016; and
- The orBec® patent expires in 2019.

#### orBec®: Acute GVHD Prevention - EU

Year penetration starts	2014	Incidence	10000
Starting penetration rate	20%	Percent addressable	100%
Years between penetration start and peak	2	Market growth rate	5%
Peak penetration	70%	Price per patient per year	\$18,000
Duration of peak penetration in years	4	Treatment price growth	3%
Retention rate in decline years	95%	Royalty rate	0%
Stage of development	Phase II	Probability of commercialization	50%

- There are approximately 10,000 allogeneic stem cell transplant patients in Europe on an annual basis<sup>21</sup>;
- Approximately 100% of the allogeneic transplant GVHD patients will be eligible for orBec® administered proactively as a preventative measure against GVHD;
- orBec® penetrates the market beginning in 2014 at a price of \$18,000 per treatment cycle;
- The price per prescription grows at an annual rate of 3%;
- orBec® penetrates 20% of the addressable market in launch year and reaches a peak penetration of 50% of the addressable market in 2016; and
- We anticipate Orphan Drug Designation to be granted, allowing for protection until 2024.

**orBec®: Chronic GI GVHD - US**

Year penetration starts	2014	Prevalence and incidence	4500
Starting penetration rate	30%	Percent addressable	100%
Years between penetration start and peak	2	Market growth rate	5%
Peak penetration	70%	Price per patient per year	\$30,000
Duration of peak penetration in years	4	Treatment price growth	3%
Retention rate in decline years	95%	Royalty rate	35%
Stage of development	Phase II	Probability of commercialization	35%

- There are approximately 10,000 allogeneic stem cell transplant patients in the U.S. on an annual basis. Approximately 15 - 30% of the patients develop chronic GVHD after the first 100 days post-transplant. Additionally, approximately 2,000 to 4,000 patients are living with chronic GVHD<sup>21,24</sup>;
- Approximately 100% of the GVHD patients will be eligible for orBec® as the preferred treatment method over existing treatment options, including methotrexate, cyclosporine, or prednisone;
- orBec® penetrates the market beginning in 2014 at a price of \$30,000 per year. This price includes two 50-day treatment cycles at \$15,000 per cycle;
- The price per prescription grows at an annual rate of 3%;
- orBec® penetrates 30% of the addressable market in launch year and reaches a peak penetration of 70% of the addressable market in 2016; and
- The orBec® patent expires in 2019. Orphan Drug Designation granted, allowing for protection until 2021.

**orBec®: Chronic GI GVHD - EU**

Year penetration starts	2015	Prevalence and incidence	4500
Starting penetration rate	30%	Percent addressable	100%
Years between penetration start and peak	2	Market growth rate	5%
Peak penetration	70%	Price per patient per year	\$24,000
Duration of peak penetration in years	4	Treatment price growth	3%
Retention rate in decline years	95%	Royalty rate	0%
Stage of development	Phase II	Probability of commercialization	35%

- There are approximately 10,000 allogeneic stem cell transplant patients in Europe on an annual basis. Approximately 15 - 30% of the patients develop chronic GVHD after the first 100 days post-transplant. Additionally, approximately 2,000 to 4,000 patients are living with chronic GVHD<sup>21,23</sup>;
- Approximately 100% of the GVHD patients will be eligible for orBec® as the preferred treatment method over existing treatment options, including methotrexate, cyclosporine, or prednisone;
- orBec® penetrates the market beginning in 2015 at a price of \$24,000 per year. This price includes two 50-day treatment cycles at \$12,000 per cycle;
- The price per prescription grows at an annual rate of 3%;
- orBec® penetrates 30% of the addressable market in launch year and reaches a peak penetration of 70% of the addressable market in 2017; and
- We anticipate Orphan Drug Designation to be granted, allowing for protection until 2024.

<sup>24</sup> Atkinson K. Chronic graft-versus-host disease. *Bone Marrow Transplant* 1990; 5: 69-82

**SGX201: Radiation Enteritis**

Year penetration starts	2014	Incidence	50000
Starting penetration rate	15%	Percent addressable	100%
Years between penetration start and peak	4	Market growth rate	5%
Peak penetration	40%	Price per patient per year	\$2,000
Duration of peak penetration in years	3	Treatment price growth	3%
Retention rate in decline years	95%	Royalty rate	25%
Stage of development	Phase II	Probability of commercialization	30%

- There are approximately 50,000 cases of radiation enteritis in the U.S. and Europe (rectal cancer patients only) on an annual basis (this does not include the potential for prostate, colon, or other abdominal cancer treatment cases related to radiation enteritis)<sup>25</sup>;
- Approximately 100% of the radiation enteritis patients will be eligible for SGX201 as there are few good existing treatment options. Most current treatments, such as antidiarrheals, pain relievers, or enzymes, are administered to relieve the symptoms of radiation enteritis rather than the underlying inflammation;
- SGX201 penetrates the market beginning in 2014 at a price of \$2,000 per treatment cycle;
- The price per prescription grows at an annual rate of 3%; and
- SGX201 penetrates 15% of the addressable market in launch year and reaches a peak penetration of 40% of the addressable market in 2014.

<sup>25</sup> Soligenix, Inc. Corporate Presentation, November 2009.

## INCOME STATEMENT

<i>\$ in thousands, except per share data</i>		2009	2010	2011	2012	2013
		2009	2010	2011	2012	2013
<b>Total revenue</b>	\$	2,000	\$ 2,200	\$ 4,591	\$ 36,794	\$ 65,734
<b>COGS</b>		1,400	1,450	1,550	1,840	3,287
<b>Gross profit</b>	\$	600	\$ 750	\$ 3,041	\$ 34,954	\$ 62,447
<b>Operating expenses</b>						
R&D	\$	4,400	\$ 5,000	\$ 5,500	\$ 6,000	\$ 7,000
Selling & marketing		-	-	4,000	5,000	7,500
General & administrative		2,300	2,550	2,800	3,050	3,300
<b>Total expense</b>		6,700	7,550	12,300	14,050	17,800
<b>Operating profit</b>	\$	(6,100)	\$ (6,800)	\$ (9,259)	\$ 20,904	\$ 44,647
<b>Non-operating income/expense</b>						
Interest expense		-	-	-	-	-
Interest income		20	-	-	-	-
Other		-	-	-	-	-
<b>Total non-operating</b>		20	-	-	-	-
<b>Pretax profit</b>	\$	(6,080)	\$ (6,800)	\$ (9,259)	\$ 20,904	\$ 44,647
Income tax		-	-	-	7,943	16,966
<b>Net income</b>	\$	(6,080)	\$ (6,800)	\$ (9,259)	\$ 12,960	\$ 27,681
<b>Earnings (loss) per share</b>	\$	(0.02)	\$ (0.02)	\$ (0.03)	\$ 0.05	\$ 0.10
<b>Diluted shares outstanding</b>		245,318	275,000	275,250	275,500	275,750

## Income Statement Assumptions:

- Soligenix receives 100% of European orBec® sales and a 35% royalty on total North American orBec® sales pursuant to partnership agreement with Sigma-Tau Pharmaceuticals;
- Milestones payable to Soligenix of \$9.0 million amortized over five years starting in 2010;
- orBec® generates revenue from off-label usage in chronic GVHD, Crohn's disease, and similar indications when approved in 2H 2011 for acute GI GVHD;
- COGS of 5.0% of total sales includes production costs and a small royalty payable to licensor of orBec® patent;
- R&D expense of \$4.4 million in 2009, \$5.5 million in 2010, \$6.0 million in 2011, \$6.5 million in 2012, and \$7.0 million in 2013 includes remaining expenses for orBec® trials and other development programs. Assumes Sigma-Tau will assist with orBec® development costs in North America;
- S&M expense of \$4 million in 2011, \$5 million in 2012, and \$7.5 million in 2013 to support the EU launch of orBec®. Sigma-Tau will assume S&M expenses related to the North American market;
- Government grants will provide additional support for overhead expenditures, as well as defray costs associated with the upcoming Phase III trial of orBec®;
- Income tax rate of 38%;
- The number of shares outstanding increases due to equity financings and the exercise of stock options and warrants. This does not include potential non-dilutive sources of funding, including additional collaboration payments and milestone, etc.

**DISCOUNTED CASH FLOW (DCF) MODEL**

Our DCF model, using a discount rate of 15%, suggests a value of \$1.35 for SNGX shares.

<i>\$ in thousands, except per share data</i>	2009	2010	2011	2012	2013
	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Revenue	\$ 2,000	\$ 2,200	\$ 4,591	\$ 36,794	\$ 65,734
Operating income	(6,100)	(6,800)	(9,259)	20,904	44,647
Net income	(6,080)	(6,800)	(9,259)	12,960	27,681
Depreciation/amortization	165	170	175	180	185
Stock-based compensation	500	500	500	500	500
Tax loss carryforwards	-	-	-	7,943	16,966
Capital expenditures	(100)	(125)	(125)	(150)	(150)
Asset acquisitions					
Other					
Total cash flow adjustments	565	545	550	8,473	17,501
Free cash flow	\$ (5,515)	\$ (6,255)	\$ (8,709)	\$ 21,434	\$ 45,182
Risk-adjusted free cash flow	\$ (5,515)	\$ (6,255)	\$ (6,967)	\$ 17,147	\$ 34,675

Discount Rate	Discounted Cash Flows (2008 - 2023)	PV of Terminal Value at a Perpetual growth rate of rFCF			Enterprise Value		
		2.0%	3.0%	4.0%	2.0%	3.0%	4.0%
7.5%	\$502,797.79	\$ 700,409	\$ 864,448	\$ 1,122,224	\$1,203,207	\$1,367,246	\$1,625,021
10.0%	\$393,588.59	\$ 341,084	\$ 393,632	\$ 463,695	\$734,672	\$787,220	\$857,284
12.5%	\$311,119.52	\$ 185,509	\$ 207,046	\$ 233,651	\$496,628	\$518,166	\$544,771
15.0%	\$248,163.68	\$ 107,753	\$ 117,877	\$ 129,842	\$355,917	\$366,041	\$378,005
17.5%	\$199,606.47	\$ 65,455	\$ 70,655	\$ 76,625	\$265,061	\$270,261	\$276,232

Discount Rate	Net Debt	Total Equity Value			Value per Diluted Share		
		2.0%	3.0%	4.0%	2.0%	3.0%	4.0%
7.5%	\$ (7,487)	\$1,210,694	\$1,367,246	\$1,632,509	\$ 4.39	\$ 4.96	\$ 5.92
10.0%	(7,487)	\$742,160	\$794,708	\$864,771	\$ 2.69	\$ 2.88	\$ 3.14
12.5%	(7,487)	\$504,115	\$525,653	\$552,258	\$ 1.83	\$ 1.91	\$ 2.00
15.0%	(7,487)	\$363,404	\$373,528	\$385,493	\$ 1.32	\$ 1.35	\$ 1.40
17.5%	(7,487)	\$272,549	\$277,749	\$283,719	\$ 0.99	\$ 1.01	\$ 1.03

Discount Rate	Terminal Value as % Enterprise Value			Implied EBITDA Multiple		
	2.0%	3.0%	4.0%	2.0%	3.0%	4.0%
7.5%	58.2%	63.2%	69.1%	11.50	14.19	18.43
10.0%	46.4%	50.0%	54.1%	7.91	9.13	10.75
12.5%	37.4%	40.0%	42.9%	6.02	6.72	7.59
15.0%	30.3%	32.2%	34.3%	4.87	5.32	5.86
17.5%	24.7%	26.1%	27.7%	4.08	4.41	4.78

## DISCLOSURES

**ANALYST(S) CERTIFICATION:** The analyst(s) responsible for covering the securities in this report certify that the views expressed in this research report accurately reflect their personal views about Soligenix, Inc. (the “Company”) and its securities. The analyst(s) responsible for covering the securities in this report certify that no part of their compensation was, is, or will be directly or indirectly related to the specific recommendation or view contained in this research report.

**MEANINGS OF RATINGS:** Our rating system is based upon 12 to 36 month price targets. **BUY** describes stocks that we expect to appreciate by more than 20%. **HOLD** describes stocks that we expect to change plus or minus 20%. **SELL** describes stocks that we expect to decline by more than 20%. **SC** describes stocks that Griffin Securities has **Suspended Coverage** of this Company and price target, if any, for this stock, because it does not currently have a sufficient basis for determining a rating or target and/or Griffin Securities is redirecting its research resources. The previous investment rating and price target, if any, are no longer in effect for this stock and should not be relied upon. **NR** describes stocks that are **Not Rated**, indicating that Griffin Securities does not cover or rate this Company.

**DISTRIBUTION OF RATINGS:** Currently Griffin Securities has assigned BUY ratings or NO RATINGS on all of the companies it covers. The Company has provided investment-banking services for 18% of companies in which it has had BUY ratings in the past 12 months, 0% for companies in which it has had NR or no coverage in the past 12 months or has suspended coverage (SC) in the past 12 months.

**MARKET MAKING:** Griffin Securities does not maintain a market in the shares of this Company or any other Company mentioned in the report.

**COMPENSATION OR SECURITIES OWNERSHIP:** The analyst(s) responsible for covering the securities in this report receive compensation based upon, among other factors, the overall profitability of Griffin Securities, including profits derived from investment banking revenue. The analyst(s) that prepared the research report did not receive any compensation from the Company or any other companies mentioned in this report in connection with the preparation of this report. The analysts responsible for covering the securities in this report currently do not own common stock in the Company, but in the future may from time to time engage in transactions with respect to the Company or other companies mentioned in the report. Griffin Securities from time to time in the future may request expenses to be paid for copying, printing, mailing and distribution of the report by the Company and other companies mentioned in this report. The Company is currently a client of Griffin Securities, Inc. Griffin Securities’ services for the Company consist of non-investment banking securities-related services and non-securities services. Griffin Securities has received compensation from the Company in the past 12 months for non-investment banking services. Griffin Securities expects to receive, or intends to seek, compensation for investment banking and non-investment banking services from the Company in the next three months.

### PRICE CHART



Source: BigCharts.com

**7/15/2009** – Initiating Coverage: share price: \$0.175; rating: BUY; 12-month price target: \$1.40. **1/6/2009** – Updating Coverage: share price: \$0.25; rating: BUY; 12-month price target: \$1.40.

**FORWARD-LOOKING STATEMENTS:** This Report contains forward-looking statements, which involve risks and uncertainties. Actual results may differ significantly from such forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in the “Risk Factors” section in the SEC filings available in electronic format through SEC Edgar filings at [www.SEC.gov](http://www.SEC.gov) on the Internet.

**GENERAL:** Griffin Securities, Inc. (“Griffin Securities”) a FINRA member firm with its principal office in New York, New York, USA is an investment banking firm providing corporate finance, merger and acquisitions, brokerage, and investment opportunities for institutional, corporate, and private clients. The analyst(s) are employed by Griffin Securities. Our research professionals provide important input into our investment banking and other business selection processes. Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients that reflect opinions that are contrary to the opinions expressed herein, and our proprietary trading and investing businesses may make investment decisions that are inconsistent with the recommendations expressed herein.

Griffin Securities may from time to time perform corporate finance or other services for some companies described herein and may occasionally possess material, nonpublic information regarding such companies. This information is not used in preparation of the opinions and estimates herein. While the information contained in this report and the opinions contained herein are based on sources believed to be reliable, Griffin Securities has not independently verified the facts, assumptions and estimates contained in this report. Accordingly, no representation or warranty, express or implied, is made as to, and no reliance should be placed on, the fairness, accuracy, completeness or correctness of the information and opinions contained in this report.

The information contained herein is not a complete analysis of every material fact in respect to any company, industry or security. This material should not be construed as an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. We are not soliciting any action based on this material. It is for the general information of clients of Griffin Securities. It does not take into account the particular investment objectives, financial situations, or needs of individual clients. Before acting on any advice or recommendation in this material, clients should consider whether it is suitable for their particular circumstances and, if necessary, seek professional advice. Certain transactions - including those involving futures, options, and other derivatives as well as non-investment-grade securities - give rise to substantial risk and are not suitable for all investors. The material is based on information that we consider reliable, but we do not represent that it is accurate or complete, and it should not be relied on as such. The information contained in this report is subject to change without notice and Griffin Securities assumes no responsibility to update the report. In addition, regulatory, compliance, or other reasons may prevent us from providing updates.

**DISCLOSURES FOR OTHER COMPANIES MENTIONED IN THIS REPORT:** To obtain applicable current disclosures in electronic format for the subject companies in this report, please refer to SEC Edgar filings at [www.SEC.gov](http://www.SEC.gov). In particular, for a description of risks and uncertainties related to subject companies' businesses in this report, see the “Risk Factors” section in the SEC filings.