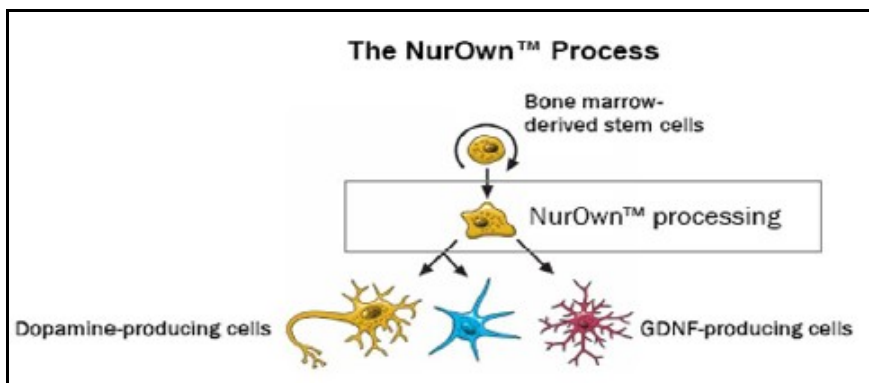


## NurOwn Adult Stem Cell Technology – Working Towards a Solution for ALS and other Neurodegenerative Diseases

**Corporate Description:** BrainStorm Cell Therapeutics Inc. (OTCBB: BCLI) is an emerging company developing adult stem cell therapeutic products, derived from autologous (self) bone marrow cells, for the treatment of neurodegenerative diseases. The patent pending technology is based on discoveries made by the scientific team led by Professor Eldad Melamed, former Head of Neurology at Rabin Medical Center, and cell biologist Prof. Daniel Offen, Head of the Neuroscience Laboratory at the Felsenstein



Medical Research Center of Tel-Aviv University. The technology allows for the differentiation of bone marrow-derived stem cells into functional neurons and astrocytes, as demonstrated in animal models. The Company holds rights to develop and commercialize the technology through an exclusive, worldwide licensing agreement with Ramot at Tel Aviv University Ltd., the technology transfer company of Tel-Aviv University. The Company's current focus is to reach clinical trials on ALS in 2010, although its technology has promise for treating several other diseases including Parkinson Disease (PD), spinal cord injury and Huntington's Disease. BCLI works only with adult stem cells, avoiding the ethical and political controversy associated with the use of embryonic stem cells.

**BCLI Progress:** BCLI's technology has already been successfully tested on various animal models of neurodegenerative diseases. Additionally, on 10/9/09, BCLI announced that recently completing testing has shown that that bone marrow cells taken from ALS patients were capable of differentiating into nerve-supporting cells. As explained by BCLI Chief Scientist, Professor Daniel Offen:

*“Our results show that ALS patient's cells are capable of undergoing expansion and differentiation. Hence, it appears that bone marrow derived stem cells from ALS patients may be beneficial for therapy through autologous (donor and recipient are the same person) transplantation using Brainstorm Cell Therapeutics' process.”*

BCLI has begun the process of growing NTF (NeuroTrophic Factors) cells and plans to proceed with final pre-clinical studies as in preparation for submission of an application to the Ministry of Health for human clinical trials in Israel.

**Please review the risk factors outlined later in this report and the important disclosures and disclaimers at the end of this report.**

**The Opportunity:** As discussed later in the report, the regulatory approval process can be lengthy and expensive, but the magnitude of the potential reward for successful biotech companies is reflected in the 34.1x price / earnings multiple of the iShares Nasdaq Biotechnology Index Fund. With regard to BCLI and its near term focus on ALS specifically, there are approximately 100,000 people diagnosed with ALS globally. Although annual ALS treatment expenditures are approximately \$1.25 billion in the U.S. and \$3 billion globally, the average life expectancy for a patient after diagnosis is only two to five years. As an indication of the need for a new approach, there is only one drug currently approved by the FDA to slow the progression of ALS – other treatments can only address the symptoms of the disease. Although the near-term focus is on ALS, the BCLI approach is valid for a range of neurodegenerative treatments including Parkinson Disease (PD), spinal cord injury and Huntington’s Disease.

**Conclusion:** With only one FDA approved drug demonstrated to slow the progress of ALS and a short post diagnosis life expectancy, it is clear that a better solution is needed to address this debilitating disease. As noted Dr. Clive Stevenson in “Stem Cells and ALS – Where are We Now?” in the Fall 2008<sup>1</sup> issue of the ALS Association’s “Research ALS Today” periodical, stem cell based approaches to treatment are likely to be part of an answer:

*“Stem cells may be able to help in the battle against ALS in many different ways -from cell therapy to disease modeling, drug delivery and drug screening. While there is much hype in the media and a number of false promises abroad, there is also a solid base of experiments and ideas that will lead the field carefully forward over the next few years. With quality science, an energetic approach, thoughtful movement towards clinical trials and responsible financial support and advocacy, we have hope.”*

Based on the Company’s progress to date and the magnitude of both the opportunity and need for new treatments for ALS and other neurodegenerative diseases, Murphy Analytics is initiating coverage on BCLI with an “Outperform” rating.

BCLI Recent Price	\$0.33
BCLI - Approximate Market Cap	\$19.7 million
52-Week Price Range	\$0.05 - \$0.49
MA Rating on BCLI	Outperform

<sup>1</sup> [http://www.alsa.org/files/pdf/rat\\_fall\\_08.pdf](http://www.alsa.org/files/pdf/rat_fall_08.pdf)

**BCLI Initiation Report – Table of Contents**

<b>BCLI Recent Financial Condition and Operating Results</b>	<b>Page 4</b>
<b>BCLI Research and License Agreement</b>	<b>Page 4</b>
<b>BCLI Strategic Overview</b>	<b>Page 6</b>
<b>ALS Data, Treatments and Trials</b>	<b>Page 10</b>
<b>iShares Nasdaq Biotechnology Index Fund</b>	<b>Page 13</b>
<b>BCLI Executive Management, Scientific Team and Share Ownership</b>	<b>Page 14</b>
<b>BCLI Risks</b>	<b>Page 15</b>
<b>BCLI Historical Price Chart</b>	<b>Page 15</b>
<b>Ratings Methodology</b>	<b>Page 15</b>
<b>Murphy Analytics Disclosure and Disclaimers</b>	<b>Page 17</b>
<b>Overview of the OTC Bulletin Board</b>	<b>Page 18</b>

**Company Contact Information:**

Emerging Markets Consulting  
Investor Relations Contact:  
James Painter, 321-206-6682  
[jamespainter0711@aol.com](mailto:jamespainter0711@aol.com)  
or  
BrainStorm Cell Therapeutics  
Mr. Rami Efrati, CEO, +972-3-9236384  
[efrati@brainstorm-cell.com](mailto:efrati@brainstorm-cell.com)

**Analyst Contact Information:**

Patrick J. Murphy, CFA  
Analyst  
Murphy Analytics  
Phone 636-273-9440  
[www.murphyanalytics.com](http://www.murphyanalytics.com)  
[pmurphy@murphyanalytics.com](mailto:pmurphy@murphyanalytics.com)

**BCLI Recent Financial Condition and Operating Results<sup>2</sup>****Financial Condition:**

- As of 6/30/09, BCLI reported \$89k in current assets including \$2k in cash and \$35k in restricted cash.
- Current liabilities of \$3 million resulted in a working capital deficit of \$2.9 million.
- Total assets of \$825k and total liabilities of \$3.1 million resulted in \$2.3 million in stockholders deficiency. Accumulated deficit was \$37 million.
- On August 24, 2009, BCLI announced that it has received a grant, for the 3<sup>rd</sup> year in a row, from Israel's Office of the Chief Scientist (OCS)<sup>3</sup>. The non-equity OCS grant of \$450,00 is in addition to the \$798,000 BCLI received previously. BCLI's royalty obligations to the OCS are capped at the amount of the grants.
- BCLI also announced an additional investment of approximately \$1 million by ACCBT, controlled by BCLI President Chaim Lebovits. The new funding will comprise monthly tranches of \$50,000 or more as of August 2009 in exchange for BCLI common shares priced at \$0.12 and warrants priced at \$0.29 per share. ACCBT has previously invested over \$4 million in BCLI.

**Operations:**

- BCLI has operated in development stage since inception and has not yet generated revenues.
- Research and development expense for Q2 2009 was \$210k and \$499k for the 6 month period ended 6/30/09.
- General and administrative expense was \$314k for Q2 and \$565 for the 6 month period.
- After financial expenses of \$19k, the net loss for Q2 as \$543k and \$1.06 million for the 6 month period.

**BCLI Research and License Agreement**

**The Ramot Agreement:** On July 8, 2004, BCLI entered into a Research and License Agreement (the "Original Ramot Agreement") with Ramot, the technology licensing company of Tel Aviv University, which Agreement was amended on March 30, 2006 by the Amended Research and License Agreement (described below). Under the terms of the Original Ramot Agreement, Ramot granted to BCLI an exclusive license to:

- (i) The know-how and patent applications on the above-mentioned stem cell technology developed by the team led by Prof. Melamed and Dr. Offen, and
- (ii) The results of further research to be performed by the same team on the development of the stem cell technology.

Simultaneously with the execution of the Original Ramot Agreement, BCLI entered into individual consulting agreements with Prof. Melamed and Dr. Offen pursuant to which all intellectual

<sup>2</sup> Reported results are unaudited.

<sup>3</sup> <http://www.moit.gov.il/NR/exeres/B3F78073-454A-48D5-A8BA-6D088DDECCD5.htm>

property developed by Prof. Melamed or Dr. Offen in the performance of services thereunder will be owned by Ramot and licensed to BCLI under the Original Ramot Agreement. .

**Ramot<sup>4</sup>:** As described at the Ramot website:

*“Ramot at Tel Aviv University Ltd. is the technology transfer company of Tel Aviv University (TAU). Ramot manages all activities relating to the protection and commercialization of inventions and discoveries made by faculty, students and other researchers of TAU. Ramot provides a dynamic interface connecting industry to leading edge science and innovation, offering new business opportunities in a wide variety of emerging markets. Founded in 1956, TAU is one of Israel's foremost research and teaching universities. Located in Israel's cultural, financial and industrial heartland, TAU is at the forefront of basic and applied research in a wide variety of scientific research disciplines.”*

**Intellectual Property:** As reported in the 2008 10-K, BCLI has filed the following patent and trademark applications:

- **WO2004/046348 METHODS, NUCLEIC ACID CONSTRUCTS AND CELLS FOR TREATING NEURODEGENERATIVE DISORDERS:** National phase filings in Israel, Canada, Japan, Europe, and the United States. Substantive examinations have been initiated in some jurisdictions, including the U.S. and Europe. A patent was granted in Singapore.
- **WO2006/134602 ISOLATED CELLS AND POPULATIONS COMPRISING SAME FOR THE TREATMENT OF CNS DISEASES:** National phase filings in the U.S., Australia, Europe, India, Israel, New Zealand, Singapore, Japan and China. Substantive examinations have been initiated in some jurisdictions, including Israel and Europe. A patent was allowed in South Africa.
- **WO2007/066338 ISOLATED OLIGODENDROCYTE-LIKE CELLS AND POPULATIONS COMPRISING SAME FOR THE TREATMENT OF CNS DISEASES.**

Two new provisional applications were submitted in the U.S. in 2008:

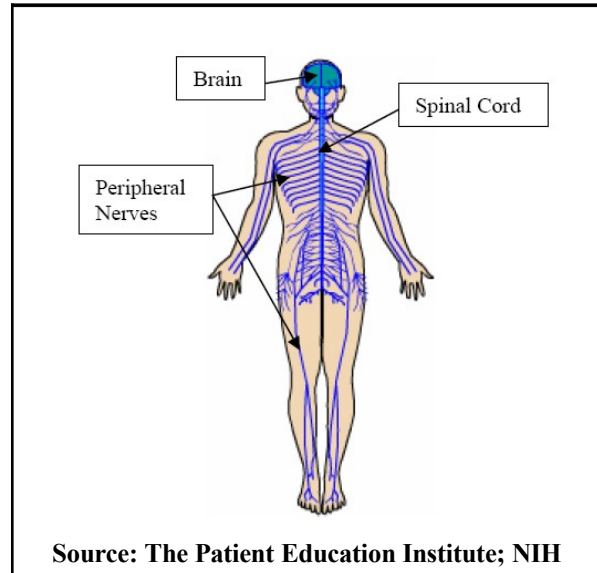
- **61/071,054: INDUCTION OF HUMAN MESENCHYMAL STEM CELLS INTO DOPAMINE-PRODUCING CELLS WITH DIFFERENT DIFFERENTIATION PROTOCOLS.**
- A joint Brainstorm-Ramot provisional patent application: **61/071,970: MESENCHYMAL STEM CELLS FOR THE TREATMENT OF CNS DISEASES.**

<sup>4</sup> <http://www.tau.ac.il/ramot/>; <http://www.ramot.org/pipeline.html>;

## BCLI Strategic Overview

**Utilizing Adult Bone Marrow Stem Cells to Treat Neurodegenerative Diseases such as ALS:**

BCLI's strategy is to utilize NurOwn technologies that enable the in-vitro differentiation of bone marrow stem cells to neural like cells. The Company's team is among the first to have successfully demonstrated release of dopamine from differentiated bone marrow cells. Moreover, in research conducted by this team, implantation of these differentiated cells into the brain of animal models that had been induced to Parkinsonian behavior markedly improved their symptoms. BCLI's aim is to provide neural stem cell transplants that "restore" damaged dopaminergic nerve cells and diseased tissue by augmentation with healthy neurotrophic factor producing cells. The team is also among the first to demonstrate creation of glial-like cells from differentiated bone marrow cells that produce and secrete neurotrophic factors (NTF) including GDNF, BDNF, NGF and IGF-1. Transplantation of these cells into rats model of PD, reduced the motor dysfunction by 50%, inhibited the induced dopamine depletion and restored the dopaminergic cells' terminals. Moreover, in-vivo imaging revealed that the engrafted cells migrated toward the lesion, indicating their survival and integration in the brain tissues.



Source: The Patient Education Institute; NIH

Therefore, Brainstorm's aim is to use this technology to maintain, preserve and restore the damaged and remaining dopaminergic cells in the patient's brain, protecting them from further degeneration. Further studies indicated that the Brainstorm's NTF cells protect motor-neuron cells against various toxins and stress that are relevant in the pathophysiology of ALS. Therefore, the Company decided to focus on ALS and one of the first applications that will be tested in clinical studies will be intra muscular injection of the NTF cells in ALS patients.

**ALS = "No Muscle Nourishment":** The etymology of the disease is explained by the ALS Association<sup>5</sup>:

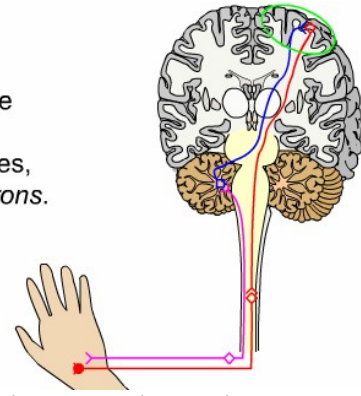
*"Amyotrophic comes from the Greek language: A- means "no", myo refers to "muscle", and trophic means "nourishment"; amyotrophic therefore means "no muscle nourishment," which describes the characteristic atrophy of the sufferer's disused muscle tissue. Lateral identifies the areas in a person's spinal cord where portions of the nerve cells that are affected are located. As this area degenerates it leads to scarring or hardening (sclerosis) in the region."*

<sup>5</sup> <http://www.alsa.org/research/topics.cfm?CFID=4448406&CFTOKEN=2c0e6a9091f337b0-6DF972EB-188B-2E62-804B03449B5D9A90>

ALS explained more fully by the National Institutes of Health<sup>6</sup>:

*“Amyotrophic lateral sclerosis (ALS), sometimes called Lou Gehrig's disease, is a rapidly progressive, invariably fatal neurological disease that attacks the nerve cells (neurons) responsible for controlling voluntary muscles. The disease belongs to a group of disorders known as motor neuron diseases, which are characterized by the gradual degeneration and death of motor neurons. Motor neurons are nerve cells located in the brain, brainstem, and spinal cord that serve as controlling units and vital communication links between the nervous system and the voluntary muscles of the body. Messages from motor neurons in the brain (called upper motor neurons) are transmitted to motor neurons in the spinal cord (called lower motor neurons) and from them to particular muscles. In ALS, both the upper motor neurons and the lower motor neurons degenerate or die, ceasing to send messages to muscles. Unable to function, the muscles gradually weaken, waste away (atrophy), and twitch (fasciculations). Eventually, the ability of the brain to start and control voluntary movement is lost.”*

ALS attacks the neurons that controls muscles, the motor neurons.



Source: The Patient Education Institute; NIH

**NurOwn Summarized by BCLI<sup>7</sup>:** The BCLI research team led by Prof. Melamed and Professor Offen has achieved expansion of human bone marrow mesenchymal stem cells and their differentiation into both types of brain cells, neurons-like and astrocyte-like, each having different therapeutic potential, as follows:

**NurOwn program 1:** Dopaminergic neuron-like cells - human bone marrow derived dopamine producing neural cells for restorative treatment in PD. Human bone marrow mesenchymal stem cells were isolated and expanded. Subsequent differentiation of the cell cultures in a proprietary differentiation medium generated cells with neuronal-like morphology and showing protein markers specific to neuronal cells. Moreover, the in-vitro differentiated cells were shown to express enzymes and proteins required for dopamine metabolism, particularly the enzyme tyrosine hydroxylase. Most importantly, the cells produce and release dopamine in-vitro. Further research consisting of implanting these cells in an animal model of PD (6-OHDA induced lesions), showed the differentiated cells exhibit long-term engraftment, survival and function in vivo. Most importantly, such implantation resulted in marked attenuation of their symptoms, essentially reversing their Parkinsonian movements.

<sup>6</sup> [http://www.ninds.nih.gov/disorders/amyotrophiclateralsclerosis/detail\\_amyotrophiclateralsclerosis.htm](http://www.ninds.nih.gov/disorders/amyotrophiclateralsclerosis/detail_amyotrophiclateralsclerosis.htm)

<sup>7</sup> BCLI 2008 10-K

**NurOwn program 2:** Neurotrophic-factors (“NTF”) secreting cells - human bone marrow derived NTF secreting cells for treatment of PD, ALS and spinal cord injury. In-vitro differentiation of the expanded human bone marrow derived mesenchymal stem cells in a proprietary medium leads to the generation of neurotrophic-factors secreting cells. The in-vitro differentiated cells were shown to express and secrete GDNF, as well as other NTFs, into the growth medium. GDNF is a neurotrophic-factor, previously shown to protect, preserve and even restore neuronal function, particularly dopaminergic cells in PD, but also neuron function in other neurodegenerative pathologies such as ALS and Huntington’s disease. Unfortunately, therapeutic application of GDNF is hampered by its poor brain penetration and stability. Attempting to infuse the protein directly to the brain is impractical and the alternative, using GDNF gene therapy, suffers from the limitations and risks of using viral vectors. BCLI preliminary results show that NTF secreting cells, when transplanted into a 6-OHDA lesion PD rat model, show significant efficacy. Within weeks of the transplantation, there was an improvement of more than 50% in the animals’ characteristic disease symptoms.

**The NurOwn Therapeutic Process:** BCLI technology is based on the NurOwn products - an autologous cell therapeutic modality, comprising the extraction of the patient bone marrow, processed into the appropriate neuronal-like cells and re-implanted into the patient’s muscles or brain. This approach is taken in order to increase patient safety and minimize any chance of immune reaction or cell rejection. BCLI believes that the therapeutic modality will comprise the following:

- *Bone marrow aspiration from patient*
- *Isolation and expansion of the mesenchymal stem cells*
- *Differentiation of the expanded stem cells into neuronal-like dopamine producing cells and/or neurotrophic-factor secreting cells*
- *Autologous transplantation into the patient*

**BCLI Recent Research Developments:** On 10/5/09, BCLI announced that announced that bone marrow cells taken from ALS patients were capable of differentiating into nerve-supporting cells. The company tested ALS patients' bone marrow stem cells in order to confirm that these stem cells could undergo BrainStorm’s differentiation procedure to secrete NeuroTrophic Factors (NTF) and used for treatment by back transplantation into the patients. The experiments performed at BrainStorm Cell Therapeutics’ research laboratories showed that the stem cells isolated from bone marrow of healthy donors and ALS patients were similar, as indicated by all the morphological and biochemical parameters tested. In addition, the cellular expansion potential of stem cells from the healthy donors and from the patients was comparable. Most important, cells from both, the healthy donors and the patients, secreted NeuroTrophic Factors (NTF) after applying Brainstorm’s unique differentiation protocols. BrainStorm will now complete all of its preparations for pre-clinical trials to be followed by clinical trials based on the company's proposed stem cell therapy. Prof. Daniel Offen, Brainstorm’s Chief Scientist, said:

*“The differentiated stem cells express specific proteins characteristic of brain (glial) cells and secrete NeuroTrophic Factors (NTF) , such as GDNF and BDNF, which are*

*essential for survival of existing neurons and encourage the growth and regeneration of new neurons...Our results show that ALS patient's cells are capable of undergoing expansion and differentiation. Hence, it appears that bone marrow derived stem cells from ALS patients may be beneficial for therapy through autologous (self) transplantation, using Brainstorm Cell Therapeutics' process."*

As previously announced, Brainstorm has now begun the process of growing its NTF cells according to the regulatory authority standards at Protein Production Services (PPS) Ltd<sup>8</sup> facilities. BrainStorm plans to proceed with final pre-clinical studies at Harlan Biotech Israel Ltd (HBI)<sup>9</sup> whereby Brainstorm will be ready to submit an application for human clinical trials in Israel to the Ministry of Health<sup>10</sup>.

**BCLI Agreement with Harlan Biotech Israel Ltd. (HBI):** As a complement to the 8/31/09 agreement executed with Protein Production Services Ltd. (PPS), a leading manufacturing contractor, the agreement with HBI will allow BCLI to complete the experiments required to submit an application to the Helsinki Committee with the Israeli Ministry of Health for starting ALS clinical trials in Israel. Under the agreement, HBI will perform pre-clinical safety experiments using the company's cGMP (current good manufacturing practices) compliant stem cells. The experiment will be performed immediately following production of the company's cGMP compliant stem cells which is currently performed by Brainstorm's scientists at PPS facilities. The production process is scheduled to extend over a period of several months, however the company has entered into the agreement with HBI in order to ensure that the necessary preparations are performed by HBI and that the safety experiments will commence at HBI without further delay. Commenting on the agreement, BCLI CEO Rami Efrati noted:

*"We are pleased that a highly-experienced contractor with a track record of successfully conducting pre-clinical experiments according to FDA and Israeli Ministry of Health standards will be assisting us in the final stages of our ALS pre-clinical program. With this strategic agreement we have now completed the necessary arrangements required for performing the mandatory safety study to achieve our goal of reaching a human clinical trial in 2010."*

#### **Links for BCLI and Peer-Reviewed Scientific Studies:**

- Stem Cells™: <http://www3.interscience.wiley.com/journal/121628354/abstract?CRETRY=1&SRETRY=0>
- Stem Cells and Development: <http://www.liebertpub.com/products/product.aspx?pid=125>; Volume 18, Number 9, 2009
- Full reports for these and other articles available at BCLI website at: <http://www.brainstorm-cell.com/Index.asp?CategoryID=77&ArticleID=99>

<sup>8</sup> <http://www.pps.co.il/>

<sup>9</sup> <http://www.harlan.com/>

<sup>10</sup> <http://www.health.gov.il/english/>

## ALS Data, Treatments and Trials

### The Numbers on ALS:

- The NIH estimates that 20,000 U.S. Americans have ALS and 5,000 are diagnosed annually. The ALS Association<sup>11</sup> estimates as many as 30,000 Americans have ALS, at an incidence of approximately 2 per 100,000, with 5,600 new diagnoses annually.
- BCLI reports there are 100,000 people with ALS in the western world alone at a cost of \$1.25 billion in the U.S. and \$3 billion for the western world.
- The average life expectancy is two to five years after diagnosis<sup>12</sup>, although 10% survive 10+ years and 5% will survive 20+ years.

**Current ALS Treatments:** As explained by BCLI, treating physicians today can only offer conventional medications to alleviate ALS symptoms or, in the case of Riluzole, slow the disease's progression. In the absence of an effective cure, treatment options focus on ways of increasing the patient's comfort and quality of life. As ALS progresses and muscles weaken, the patient may benefit from rehabilitation services such as physical and occupational therapy, speech therapy and the use of assistive devices to enhance independence and quality of life. As ALS weakens muscles used to breathe, the patient may need a ventilator (breathing machine), initially while sleeping and eventually full time. Scientists have not yet identified a reliable biological marker for ALS—a biochemical abnormality shared by all patients with the disease. Once such a biomarker is discovered and tests are developed to detect the marker in patients—allowing early detection and diagnosis of ALS—physicians will have a valuable tool to help them follow the effects of new therapies and monitor disease progression.

The physician bases medication decisions on the patient's symptoms and the stage of the disease. Some medications used for ALS patients include:

- **Riluzole**<sup>13</sup>: The only medication approved by the FDA to slow the progress of ALS. While it does not reverse ALS, Riluzole has been shown to reduce nerve damage. Riluzole may extend the time before a patient needs a ventilator (a machine to help breathe) and may prolong the patient's life by several months;
- **Baclofen or Diazepam**: These medications may be used to control muscle spasms, stiffness or tightening (spasticity) that interfere with daily activities; and
- **Trihexyphenidyl or Amitriptyline**: These medications may help patients who have excess saliva or secretions, and emotional changes.

<sup>11</sup> <http://www.alsa.org/als/facts.cfm?CFID=4459429&CFTOKEN=d2d1f9773161594c-73E49146-188B-2E62-80A5930BA1D8FDDE>

<sup>12</sup> <http://www.alsa.org/als/facts.cfm>

<sup>13</sup> <http://products.sanofi-aventis.us/rilutek/rilutek.html>

- Other medications may be prescribed to help reduce such symptoms as fatigue, pain, sleep disturbances, constipation, and excess saliva and phlegm.

**Note re the AAN:** On October 13, 2009, the American Academy of Neurology (AAN) updated the guidelines for the care of ALS patients<sup>14</sup>, stating that although only riluzole has received FDA approval, there have been advances in symptomatic treatment, including nutritional support via percutaneous endoscopic gastrostomy (PEG) and non-invasive ventilation (NIV) to improve respiratory function.

**Stem Cell and Medical Glossaries:**

NIH Stem Cell Glossary: <http://stemcells.nih.gov/info/glossary.asp>

NIH General Medical Glossary: <http://www.nlm.nih.gov/medlineplus/mplusdictionary.html>

**Current Clinical Trials:** The ALS Association provides information on several dozen open and closed / completed trials covering a range of compounds and trials by public and private researchers as well as university based research at such places as The Packard Center<sup>15</sup> at Johns Hopkins University. The info on the trials may be found at: <http://www.alsa.org/patient/drug.cfm>.

There is also an NIH database tracking various studies at [www.clinicaltrials.gov](http://www.clinicaltrials.gov), where a search for the terms “ALS” and “Amyotrophic lateral sclerosis” produced 132 results<sup>16</sup>.

<sup>14</sup> <http://www.aan.com/practice/guideline/index.cfm?fuseaction=home.welcome&Topics=19&keywords=als&Submit=Search+Guidelines>

<sup>15</sup> <http://www.alscenter.org/about/>

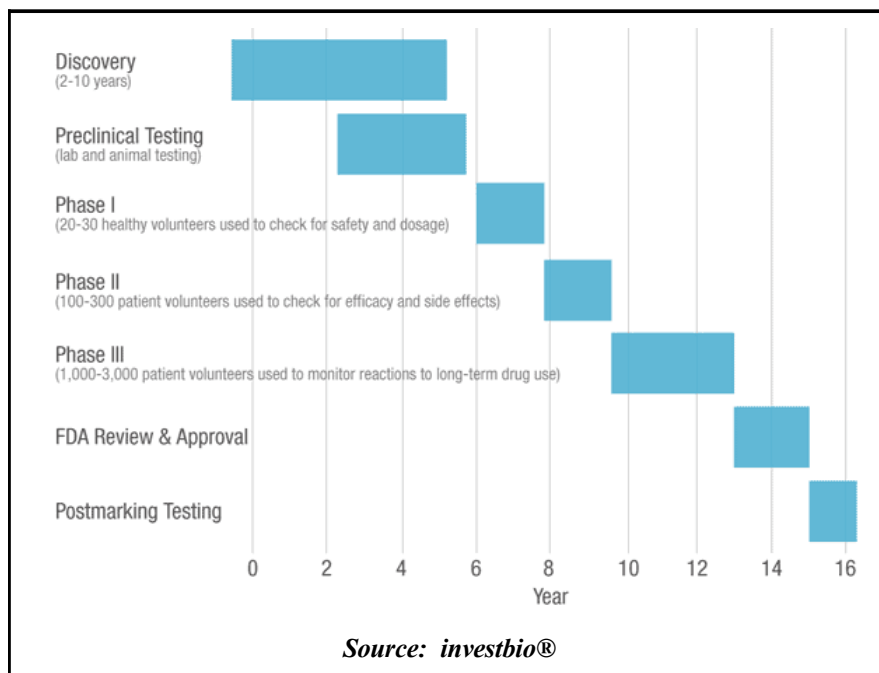
<sup>16</sup> <http://clinicaltrials.gov/ct/search;jsessionid=4A6A73E5213670CD8AEB4306533481F1?term=Amyotrophic+Lateral+Sclerosis&submit=Search>

**Regulatory Process**<sup>17</sup>: As illustrated by investbio<sup>®</sup><sup>18</sup>, which evaluates and invests alongside clients in promising venture capital and private equity biotechnology treatment and drugs, the approval process with the U.S. FDA can be very time consuming. The FDA approval process for drugs and therapeutic biologic applications is explained in more detail at the FDA web site<sup>19,20</sup>. A June 2007 study by Duke University's Henry Grabowski<sup>21</sup>, who also co-authored, with Joseph DiMasi, a 2007 entitled study "*Managerial and Decision Economics – The Cost of Biopharmaceutical R&D: Is Biotech Different?*", estimates 90.3 months for approval for new chemical entities, from Phase 1 Clinical Trials through regulatory review (RR) periods, and 97.7 months for biologicals. DiMasi and Grabowski<sup>22</sup> also found an average of \$198 million spent on the development of biopharmaceutical molecules during the pre-clinical period and \$361 million during the clinical period.

Explained more fully in the 2008 10-K, BCLI summarizes the FDA approval strategy as:

*"Although there can be no assurance that the FDA will not choose to change its regulations, current regulation proposes that cell products which are manipulated, allogeneic,*

*or as in our case, autologous but intended for a different purpose than the natural source cells (NurOwn are bone marrow derived and are intended for transplantation into the brain or into the muscles) must be regulated through a "tiered approach intended to regulate human cellular and tissue based products only to the extent necessary to protect public health". Thus the FDA requires: (i) preclinical laboratory and animal testing; (ii) submission of an IND exemption which must be effective prior to the initiation of human clinical studies; (iii) adequate and well-controlled clinical trials to establish the safety and efficacy of the product for its intended use; (iv) submission to the FDA of a BLA; and (v) review and approval of the BLA as well as inspections of the manufacturing facility for GMP compliance, prior to commercial marketing of the product."*



<sup>17</sup> <http://www.fda.gov/Drugs/DevelopmentApprovalProcess/HowDrugsareDevelopedandApproved/default.htm>

<sup>18</sup> [http://www.investbio.com/clinical\\_trials\\_biotech.asp](http://www.investbio.com/clinical_trials_biotech.asp)

<sup>19</sup> <http://www.fda.gov/Drugs/DevelopmentApprovalProcess/HowDrugsareDevelopedandApproved/default.htm>

<sup>20</sup> <http://www.fda.gov/Drugs/DevelopmentApprovalProcess/HowDrugsareDevelopedandApproved/ApprovalApplications/TherapeuticBiologicApplications/default.htm>

<sup>21</sup> <http://www.econ.duke.edu/Papers/PDF/DataExclusivityWorkingPaper.pdf>

<sup>22</sup> [http://www.manhattan-institute.org/projectfda/wiley\\_interscience\\_cost\\_of\\_biopharm.pdf](http://www.manhattan-institute.org/projectfda/wiley_interscience_cost_of_biopharm.pdf)

## iShares Nasdaq BioTechnology Index Fund<sup>23</sup>

The iShares Nasdaq Biotechnology Index Fund seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of companies primarily engaged in the biotechnology industry, as represented by the NASDAQ Biotechnology Index<sup>®</sup>. Following is the 1-year performance of the Fund:



### Select Characteristics of the Fund

#### Top Holdings as of 10/13/09:

11.06% AMGEN INC  
8.33% GILEAD SCIENCES INC  
7.48% TEVA PHARMACEUTICAL  
6.43% CELGENE CORP  
3.43% VERTEX PHARMACEUTICALS  
3.20% BIOGEN IDEC INC  
3.13% GENZYME CORP  
2.80% ILLUMINA INC  
2.39% ALEXION PHARMACEUTICALS  
2.18% WARNER CHILCOTT

#### Valuation Multiples as of 9/30/09:

Price / Earnings:  
**34.1x**

Price / Book:  
**5.9x**

#### Top sectors as of 9/30/09:

62.11% Medical-Biomedical / Gene  
11.90% Medical-Generic Drugs  
10.96% Medical-Drugs  
8.35% Therapeutics  
1.66% Diagnostic Kits  
1.37% Drug Delivery Systems  
1.28% Medical Instruments  
1.23% Diagnostic Equipment  
0.59% Medical Products  
0.21% Research & Development

<sup>23</sup> [http://us.ishares.com/product\\_info/fund/overview/IBB.htm](http://us.ishares.com/product_info/fund/overview/IBB.htm)

**BCLI Executive Management, Scientific Team and Share Ownership**

**Abraham (Rami) Efrati**, age 59<sup>24</sup>, joined the Company in October 2007 as Chief Executive Officer. On April 13, 2009, Mr. Efrati was elected to the Board of Directors. In 2004, Mr. Efrati founded, and is currently the Chief Executive Officer of, Pro-Int Ltd., a private company. In 2005, Mr. Efrati co-founded, and is currently the Chief Executive Officer of, TeleFlight Technologies Ltd., a technology company specializing in research and development of micro electronics solutions mainly oriented for unmanned systems. From 1997 until 2004, Mr. Efrati served as the Vice President, Sales, Business Development and Marketing for the government project division of NICE-Systems Ltd., a leading provider of solutions that capture, manage and analyze unstructured multimedia content and transactional data enabling companies and public organizations to enhance business and operational performance, address security threats and behave proactively.

**Chaim Lebovits**, age 38, joined the Company in July 2007 as President. Mr. Lebovits controls ACC Holdings, a holding company which controls three subsidiaries: (i) C&L Natural Resources; (ii) ACC Resources; and (iii) ACCBT. C&L Natural Resources focuses on oil production in West Africa and operates an oil and gas field with proven reserves of 20 million barrels of oil and an option to discover up to an additional 100 million barrels of oil. ACC Resources holds 10 permits for gold exploration in Burkina Faso. ACCBT focuses on new and emerging biotechnologies. Mr. Lebovits has been at the forefront of mining and natural resource management in the African region for close to a decade. Mr. Lebovits serves as the President and as a director of Dominion Minerals Corp., a company that trades on the OTC BB.

**David Stolick**, age 43, joined the Company in February 2005 as Chief Financial Officer. From January 1995 to April 2005, Mr. Stolick was Corporate Controller of M-Systems Flash Disk Pioneers Ltd., a NASDAQ listed company. In 1994, he served as Deputy Controller of Electronics Line Ltd., an Israeli publicly traded company, and from 1991 until 1994 he was Audit Manager at Goldstein, Sabbo, and Tebet Accountants. Mr. Stolick holds a B.A. in Economics and Accounting from Ben-Gurion University. He has been qualified as a certified accountant in Israel since 1993.

**Dr. Avinoam Kadouri - Chief Technology Advisor.** Dr. Kadouri is a leading scientist in the field of industrial biotechnology with a worldwide reputation. He has 15 years of experience as R&D Director and Worldwide Process Development Director at Serono International, Switzerland. Currently, Dr. Kadouri is the chairman of ACTIP (Animal Cell Technology Industrial Platform), an important European Organization of the major biotech companies.

**Prof. Eldad Melamed, M.D. - Chief Medical Advisor.** Prof. Melamed is a world-renowned expert in the field of neurodegenerative diseases, particularly on Parkinson's disease. Prof. Melamed has served as head of the Neurology Department at the Rabin Medical Center and Tel

<sup>24</sup> All ages as of 4/15/09

Aviv University since 1987. Throughout his career, he has specialized in neurology, holding senior positions at the Hebrew University (Jerusalem), Bispebjerg Hospital (Copenhagen), National Hospital (London) and at the Laboratory of Neuroendocrine Regulation (Massachusetts). He is a past president of the Israel Neurological Association and former director of the National Parkinson Foundation (USA). Prof. Melamed is a member of the Scientific Committee of the Michael J Fox Foundation for Parkinson's Research. Prof. Melamed is a co-inventor named in the NurOwn technology patent.

**Prof. Daniel Offen - Chief Scientist.** Dr. Offen enjoys an internationally recognized reputation in neuroscience research. Since 1993 he has been head of the Neuroscience Laboratory at Tel Aviv University School of Medicine. He has lectured extensively, both at Tel Aviv University and international scientific conferences, and has supervised many PhD students. Dr. Offen has published over 100 original scientific papers and several patents. Dr. Offen is a member of the Scientific Committee of the Israel Society for Neuroscience and a co-inventor named in the NurOwn technology patent.

Name of Beneficial Owner – As of March 26, 2009*	Shares Beneficially Owned	
	# Shares / Options / Warrants	% of Class
<b>Directors, Nominees and Named Executive Officers</b>		
Abraham Efrati	500,000	*
Chaim Lebovits	39,481,925	51.7%
David Stolick	752,778	1.3%
Irit Arbel	2,600,000	4.7%
Jonathan Javitt	1,060,000	1.9%
Moshe Lion	100,000	*
Robert Shorr	300,000	*
Malcolm Taub	1,350,000	2.4%
All directors and Named Executive Officers as a group (8 persons)	46,144,703	59.0%
<i>*The percentage of the Common Stock beneficially owned by each person or entity named in the table is based on 55,241,418 shares of Common Stock outstanding as of March 26, 2009 plus any shares issuable upon exercise of Presently Exercisable Options and Presently Exercisable Warrants held by such person or entity.</i>		

Murphy Analytics Estimate of Outstanding Common Shares, Options, Warrants	
Outstanding Common Shares as of 8/13/09	59,791,418
Options Outstanding as of 6/30/09 at \$0.209 Average Exercise Price	6,783,361
Warrants Issued to Service Providers - Outstanding as of 6/30/09 with Exercise Prices of \$0.01 - \$0.75	34,485,237
Shares Issued as Part of 8/18/09 amended investment agreement	9,916,667

## BCLI Risks

As discussed in detail in BCLI's SEC filings, which should be read in conjunction with this report, the Company faces various operational risks, including:

- BCLI's ability to continue as a going concern is dependent on the ability to obtain additional investment capital, resulting in potential dilution for existing shareholders.
- Regulatory approval in the U.S. and elsewhere can be time consuming and very expensive. The FDA approval process as many as 8 years on average and can cost hundreds of millions of dollars without assurance of success.
- As reported in the 2<sup>nd</sup> quarter 2009 10-Q, BCLI was in breach of the research and licensing agreement with Ramot and Ramot may terminate the agreement. Given the 5-year relationship and close collaboration between the Company and Ramot, Murphy Analytics is assuming that BCLI will be able to resolve this breach successfully.

## BCLI Historical Price Chart

Following is the price and volume trading chart for BCLI for the preceding 52 weeks provided by [www.BigCharts.com](http://www.BigCharts.com):



## Ratings Methodology

Murphy Analytics subscription research service classifies stocks as “Underperform”, “Outperform” or “Market Perform”. A “Market Perform” rating implies performance expected to be generally consistent with the performance of the NASDAQ Composite Index. An “Underperform” rating implies expected underperformance versus this index and an “Outperform” rating implies expected outperformance relative to the index. Murphy Analytics has published nine “Outperform” ratings.

**MURPHY ANALYTICS DISCLOSURES AND DISCLAIMERS**

This report by Murphy Analytics LLC and the Analyst (together referred to as "MA") on Brainstorm Cell Therapeutics (the "Company") is to be used for informational purposes only. Nothing in this report should be construed as investment advice or as an offer to buy or sell any securities. This report is based on information assumed to be reliable and accurate, but MA does not guarantee or make any representation with regard to its reliability, accuracy or completeness. MA made no attempt to independently verify the reliability, accuracy or completeness of this information utilized in the writing of this report. The opinions expressed in this report are subject to change without notice. MA accepts no liability with regard to any loss arising from any use of this report. Past performance of the Company should not be taken as an indication or guarantee of future performance, and no representation or warranty, expressed or implied, is made by MA regarding future performance. Any security discussed in this report may be deemed speculative and therefore not appropriate or suitable for all investors. This report contains statements that are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on estimates and projections made by the Company and/or by MA. These estimates and projections are derived in part on assumptions, and are not guarantees of future performance. Because future performance is quite difficult to predict, actual outcomes and results may differ materially from what is expressed or forecasted in forward-looking statements due to numerous factors. Such factors include, but are not limited to, the Company's ability to execute effectively its business plan and acquisition strategy, failure by the Company to retain key personnel, changes in the markets in which the Company operates, the development of new products and services that compete with those offered by the Company, competitive pressures, economic and political conditions, changes in consumer behavior, the introduction of competing products having technological and/or other advantages, and other risks not contemplated by the Company or by MA. These and other risks are described in the Company's filings with the Securities and Exchange Commission. These filings should be read in conjunction with the MA report. MA was paid \$3,720 by the Company in advance of the publication of this report. MA assumes no responsibility to update information concerning the Company. MA owns no shares in the Company. MA does not provide investment banking services. The Analyst serves as a research analyst for a broker/dealer that provides investment banking services. No part of the compensation to MA is tied to any content contained in this report or any view expressed in this report. The Analyst for this report Patrick J. Murphy, CFA, has over 15 years of 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, commercial MBS 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. I, Patrick J. Murphy, hereby certify that all views expressed in this report accurately reflect my personal views about the Company, and that no part of my compensation was or will be related to the views expressed in this report.

**Overview of the OTC Bulletin Board<sup>25</sup>**

The OTC Bulletin Board<sup>®</sup> (OTCBB) is a regulated quotation service that displays real-time quotes, last-sale prices, and volume information in over-the-counter (OTC) equity securities. An OTC equity security generally is any equity that is not listed or traded on NASDAQ<sup>®</sup> or a national securities exchange. OTCBB securities include national, regional, and foreign equity issues, warrants, units, American Depositary Receipts (ADRs), and Direct Participation Programs (DPPs). The OTCBB is a quotation medium for subscribing members, not an issuer listing service, and should not be confused with The NASDAQ Stock Market<sup>SM</sup>. There are no minimum quantitative standards which must be met by an issuer for its securities to be quoted on the OTCBB; however, the new Eligibility Rule limits quotations on the OTCBB to the securities of issuers that are current in their reports filed with the SEC or other regulatory authority. Issuers do not have any filing or reporting requirements with The NASDAQ Stock Market, Inc., or FINRA. Market Makers will be required to provide the periodic financial reports filed by OTCBB issuers with the SEC or other regulatory authorities pursuant to the Eligibility Rule. NASDAQ has no business relationship with the issuers of securities quoted on the OTCBB. Investors must contact a broker/dealer to trade OTCBB securities. Investors do not have direct access to the OTCBB service. The Securities and Exchange Commission's (SEC's) Order-Handling Rules which apply to NASDAQ-listed securities do not apply to OTCBB securities. It is important to note that FINRA has no regulatory authority over OTC Bulletin Board issuers. FINRA's responsibilities include establishing rules governing its broker/dealer members' business conduct; setting qualification standards for securities industry professionals; examining members for their financial and operational condition as well as their compliance with appropriate rules and regulations; investigating alleged violations of securities laws; disciplining violators of applicable rules and regulations; and responding to inquiries and complaints from investors and members. Due to the high level of risk involved in investing in Penny Stocks, the SEC created Rule 15g-2, which makes it "unlawful for a broker or dealer to effect a transaction in any penny stock for or with the account of a customer unless, prior to effecting such transaction, the broker or dealer has furnished to the customer a document containing the information set forth in Schedule 15G, Rule 15g-100, and has obtained from the customer a manually signed and dated written acknowledgement of receipt of the document." (SEC Rule 15g-2(a), Risk Disclosure Document Relating to the Penny Stock Market). If you believe that you have been defrauded by an OTC Bulletin Board issuer, you may file a complaint with your State Securities Regulator or contact the SEC's Office of Investor Education and Assistance.

---

<sup>25</sup>