CEL SCI CORP
Form 10-K
January 13, 2009

FORM 10-K

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
(Mark One)

(X) ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended September 30, 2008.

OR

( ) TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____.

Commission file number 1-11889

CEL-SCI CORPORATION

(Exact name of registrant as specified in its charter)

COLORADO	84-0916344
(State or other jurisdiction of incorporation or organization)	(I.R.S.Employer Identification No.)
8229 Boone Blvd., Suite 802 Vienna, Virginia	22182
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (703) 506-9460
Securities registered pursuant to Section 12(b) of the Act: None
Securities registered pursuant to Section 12(g) of the Act:

Common Stock, $.01 par value

(Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. [ ]

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. [ ]

Indicate by check mark whether the registrant (1) has filed all reports to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes [X] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

Indicate by check mark whether the registrant is a large accelerated filer, an

accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer [ ] Accelerated filer [ ]

Non-accelerated filer [ ] Smaller reporting company [X]
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act): [ ] Yes [X] No

The aggregate market value of the voting stock held by non-affiliates of the Registrant, based upon the closing sale price of the common stock on March 31, 2008, as quoted on the NYSE Alternext US, was $73,839,745.

As of December 31, 2008, the Registrant had 123,636,965 issued and outstanding shares of common stock.

Documents Incorporated by Reference: None

PART I

ITEM 1. BUSINESS

CEL-SCI Corporation (CEL-SCI) was formed as a Colorado corporation in 1983. CEL-SCI's principal office is located at 8229 Boone Boulevard, Suite 802, Vienna, VA 22182. CEL-SCI's telephone number is 703-506-9460 and its web site is www.cel-sci.com. CEL-SCI makes its electronic filings with the Securities and Exchange Commission (SEC), including its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports available on its website free of charge as soon as practicable after they are filed or furnished to the SEC.

OVERVIEW

CEL-SCI's lead product, Multikine(R), has been cleared for a global Phase III clinical trial in advanced primary (previously untreated) head and neck cancer patients. Multikine is being developed for the treatment of cancer. It is the first of a new class of cancer immunotherapy drugs called Immune SIMULATORs. It simulates the activities of a healthy person's immune system, which battles cancer every day. Multikine is multi-targeted; it is the only cancer immunotherapy that both kills cancer cells in a targeted fashion and activates the general immune system to destroy the cancer. We believe Multikine is the first immunotherapeutic agent being developed as a first-line standard of care treatment for cancer.

CEL-SCI took delivery of its new manufacturing facility for its lead drug Multikine on October 8, 2008. This dedicated facility will be used to produce the Multikine that will be used for CEL-SCI's pivotal Phase III clinical trial and subsequently for sale following approval of the drug. CEL-SCI needs to raise additional funds in order to launch the global Phase III clinical trial. CEL-SCI is currently working on partnerships and joint ventures to finance the part of the Phase III clinical trial that will not be funded by its existing partners. If CEL-SCI cannot raise the funds in a timely manner the Phase III clinical trial will be delayed.

Multikine is a new type of immunotherapy in that it is a comprehensive immunotherapy, incorporating both active and passive immune activity. A comprehensive immunotherapy most closely resembles the workings of the natural immune system in the sense that it works on multiple fronts in the battle against cancer. A comprehensive immunotherapy causes a direct and targeted killing of the tumor cells and activates the immune system to produce a more robust and sustainable anti-tumor response.

Multikine is designed to target the tumor micro-metastases that are mostly responsible for treatment failure. The basic concept is to add Multikine to the current cancer treatments with the goal of making the overall cancer treatment more successful. Phase II data indicated that Multikine treatment resulted in a substantial increase in the survival of patients. The lead indication is advanced primary (previously untreated) head & neck cancer (about 600,000 new cases per annum). Since Multikine is not tumor specific, it may also be applicable in many other solid tumors.

Multikine is the first immunotherapeutic agent being developed as a first-line treatment for cancer. It is administered prior to any other cancer therapy because that is the period when the anti-tumor immune response can still be fully activated. Once the patient has had surgery or has received radiation and/or chemotherapy, the immune system is severely weakened and is less able to mount an effective anti-tumor immune response. To date, other immunotherapies have been administered later in cancer therapy (i.e., after radiation, chemotherapy, surgery).

In January 2007, the US Food and Drug Administration (FDA) concurred with the initiation of a global Phase III clinical trial in head and neck cancer patients using Multikine. The Canadian regulatory agency, the Biologics and Genetic Therapies Directorate, had previously concurred with the initiation of a global Phase III clinical trial in head and neck cancer patients using Multikine.

The protocol is designed to develop conclusive evidence of the efficacy of Multikine in the treatment of advanced primary (previously untreated) squamous cell carcinoma of the oral cavity (head and neck cancer). A successful outcome from this trial should enable CEL-SCI to apply for a Biologics License to market Multikine for the treatment of this patient population.

The trial will test the hypothesis that Multikine treatment administered prior to the current standard therapy for head and neck cancer patients (surgical resection of the tumor and involved lymph nodes followed by radiotherapy or radiotherapy and concurrent chemotherapy) will extend the overall survival, enhance the local/regional control of the disease and reduce the rate of disease progression in patients with advanced oral squamous cell carcinoma.

Clinical trials in over 200 patients have been completed with Multikine with the following results:

1) It has been demonstrated to be safe and non-toxic.

2) It has been shown to render cancer cells much more susceptible to radiation therapy (The Laryngoscope, December 2003, Vol.113 Issue 12).

3) A publication in the Journal of Clinical Oncology (Timar et al, JCO, 23(15): May 2005), revealed the following:

(i) Multikine induced anti-tumor immune responses through the combined activity of the different cytokines present in Multikine following local administration of Multikine for only three weeks.

(ii) The combination of the different cytokines caused the induction, recruitment into the tumor bed, and proliferation of anti-tumor T-cells and other anti-tumor inflammatory cells, leading to a massive anti-tumor immune response.

(iii) Multikine induced a reversal of the CD4/CD8 ratio in the tumor infiltrating cells, leading to a marked increase of CD4 T-cells in

the tumor, which resulted in the prolongation of the anti-tumor immune response and tumor cell destruction.

(iv) The anti-tumor immune-mediated processes continued long after the cessation of Multikine administration.

(v) A three-week Multikine treatment of patients with advanced primary oral squamous cell carcinoma resulted in an overall response rate of 42% prior to standard therapy, with 12% of the patients having a complete response.

(vi) A histopathology study showed that the tumor load in Multikine treated patients was reduced by nearly 50% as compared to tumors from control patients in the same pathology study.

(vii) The tumors of all of the patients in this Phase II trial who responded to Multikine treatment were devoid of the cell surface marker for HLA Class II. This finding, if confirmed in this global Phase III clinical trial, may lead to the establishment of a marker for selecting the patient population best suited for treatment with Multikine.

(viii) In a Phase II study, using the same drug regimen as will be used in the Phase III study, the addition of Multikine as first-line treatment prior to the standard of care treatment resulted in a 33% improvement in the median overall survival at 3 1/2 years post-surgery, when compared to the results of 55 OSCC clinical trials published in the scientific literature between 1987 and 2007.

CEL-SCI also owns a pre-clinical technology called L.E.A.P.S.TM (Ligand Epitope Antigen Presentation System). One of the lead products derived from this technology is the CEL-1000 peptide which has shown protection in animals against herpes, malaria, viral encephalitis and cancer. Another product is CEL-2000 which is being tested for the treatment of rheumatoid arthritis. Recent data indicate that CEL-SCI's rheumatoid arthritis vaccine CEL-2000 prevents or retards the permanent tissue damage caused by rheumatoid arthritis in an animal model of the disease, The data were derived from a histopathological analysis of tissues samples collected in comparative studies of CEL-2000 and Enbrel(R) that were conducted in a well established animal model of rheumatoid arthritis. Enbrel is a leading treatment for people with rheumatoid arthritis.

MULTIKINE

Multikine is the first of a new class of cancer immunotherapy drugs called Immune SIMULATORs. It simulates the activities of a healthy person's immune system, which battles cancer every day. Multikine is multi-targeted; it is the only cancer immunotherapy that both kills cancer cells in a targeted fashion and activates the general immune system to destroy the cancer.

Multikine is a new type of immunotherapy in that it is a comprehensive immunotherapy, incorporating both active and passive immune activity. A comprehensive immunotherapy most closely resembles the workings of the natural

immune system in the sense that it works on multiple fronts in the battle against cancer. A comprehensive immunotherapy causes a direct and targeted killing of the tumor cells and activates the immune system to produce a more robust and sustainable anti-tumor response.

Multikine works in a comprehensive way to marshal an effective killing of the tumor:

1. Multikine attacks multiple antigens on the cancer cells.

2. Multikine directly kills cancer cells:

   - The various cytokines present in Multikine, such as TNF, IL-1, along with other cytokines, are responsible for this activity.

3. Multikine signals the immune system to mount an effective and sustainable anti-tumor immune response:

   - Multikine changes the type of cells that infiltrate and attack the tumor from the `usual' CD-8 cells to CD-4 cells. These CD-4 cells bring about a more robust anti-tumor response.

     - This is extremely important because the tumor is able to shut down the infiltrating CD-8 cells, but is unable to shut down the CD-4 cell attack. In addition, CD-4 cells help break "tumor tolerance," thereby allowing the immune system to recognize, attack, and destroy the tumor. The normal immune system is `blind' to tumor cells because the tumor cells are derived from the body's own cells, and thus the body `thinks' of the tumor as `self', a phenomenon also known as `tumor tolerance'.

4. Multikine renders the remaining cancer cells potentially much more susceptible to radiation and chemotherapy treatment, thereby making these treatments much more effective.

Multikine is currently being developed as first-line therapy for advanced primary head and neck cancer. This is a deadly cancer in which there is a clear unmet medical need. The recurrence rate is high and about one out of every two patients die within three years. Currently used therapies (surgery followed by radiation, chemotherapy or radio-chemotherapy) fail to completely arrest the disease because they are unable to completely remove or kill all of the cancer cells. The persistence of these residual cells is responsible for the cancer's recurrence or metastasis. Multikine is injected five times a week for three weeks around the tumor (peri-tumorally) as well as in the vicinity of the local lymph nodes (peri-lymphatically) prior to the patient's tumor being removed surgically and the patient receiving any other therapy because these are the areas in which the cancer will recur and from which metastases will develop.

Multikine unleashes and then harnesses and enhances the immune system's ability to target and kill those tumor cells before they can cause recurrence or metastasize. It is expected that multiple indications will be pursued over time since it is the same principle for different cancers.

Summary of Key Multikine Responses:

The following efficacy was seen in the last Phase II study conducted with Multikine. This study used the same treatment protocol as will be used in the Phase III study:

- 33% improvement in median overall survival: In the last Phase II study a 33% improvement in median overall survival at a median of 3.5 years post surgery was seen in patients with locally advanced disease treated with Multikine as first-line therapy (absolute survival rate 63%) over the 3.5 year median overall survival rates of the same cancer patient population determined from a review of 55 clinical trials reported in the scientific literature that were conducted between 1987 and 2007. CEL-SCI's Phase III clinical trial will need to demonstrate a 10% improvement in overall survival for Multikine to be successful.

- Average of 50% reduction in tumor cells: The 3 week Multikine treatment regimen used in the last Phase II study killed, on average, about half of the cancer cells before the start of standard therapy like surgery, radiation and chemotherapy (as determined by histopathology).

- 12% complete response: In 12% of patients the tumor was completely eliminated after only a 3 week treatment with Multikine (as determined by histopathology).

History of Multikine

Multikine has been tested in over 200 patients in clinical trials conducted in the U.S., Canada, Europe and Israel. Most of these patients were head and neck cancer patients, but some studies were also conducted in prostate cancer patients, HIV-infected patients and HIV-infected women with Human Papilloma Virus ("HPV")-induced cervical dysplasia, the precursor stage before the development of cervical cancer. The safety profile was found to be very good and CEL-SCI believes that the clinical data suggests that further studies are warranted.

The objective of CEL-SCI scientists is to use Multikine as an adjunct (additive) therapy to the existing treatment of previously untreated head & neck cancer patients with the goal of killing cancer cells and activating the general immune system to destroy the cancer. However, pursuant to FDA regulations, CEL-SCI was required to test the drug first for safety in locally recurrent, locally metastatic head and neck cancer patients who had failed other cancer therapies. This dose escalation study was started in 1995 at several centers in Canada and the US where 16 patients were enrolled at 4 different dosage levels. The study ended in 1998 and showed Multikine to be safe and well tolerated at all dose levels.

Because CEL-SCI scientists have determined that patients with previously untreated disease would most likely benefit more from Multikine treatment, CEL-SCI started a safety trial in Canada in 1997 in advanced primary head & neck cancer patients who had just recently been diagnosed with head & neck cancer.

This study ultimately enrolled 28 patients, also at 4 different dosage levels, and ended in late 1999. Halfway through this study, CEL-SCI launched a number of Phase II studies in advanced primary head & neck cancer to determine the best

dosage, best route of administration and best frequency of administration of Multikine. Those studies involved 19 patients in Israel (1997 - 2000), 30 patients in Poland and the Czech Republic (1999 - 2000), and 94 patients (half treated with Multikine and the other half disease-matched cancer patients served as control) in Hungary (1999 - 2003). The Hungarian trial compared the control group (receiving only conventional cancer therapy) to the Multikine treated patients (receiving Multikine prior to conventional therapy) by histopathology and immunohistochemistry. The results of these studies were published in peer-reviewed scientific journals and/or presented at scientific meetings. The studies that have not yet been published were conducted in support of Multikine's safety and clinical utility.

The above studies, which are all completed, indicate that Multikine was safe and well tolerated at all dose levels investigated. The studies also showed partial and complete tumor responses following Multikine treatment at the best treatment regimen combinations as well as tumor necrosis (destruction) and fibrosis (as determined by histopathology).

The initial results of the Hungarian study were published in December 2003. Data from a Phase I/II clinical trial in fifty-four (54) advanced primary head and neck cancer patients (half treated, half control), the first part of the Hungarian study, were published in The Laryngoscope, December 2003, Vol.113 (12). The title of the article is "The Effect of Leukocyte Interleukin Injection (MULTIKINE) on the Peritumoral and Intratumoral Subpopulation of Mononuclear Cells and on Tumor Epithelia: A Possible New Approach to Augmenting Sensitivity to Radiation Therapy and Chemotherapy in Oral Cancer - A Multi Center Phase I/II Clinical Trial".

The data demonstrate that treatment with Multikine rendered a high proportion of the tumor cell population highly susceptible to radiation therapy. This finding represents a major advance in the treatment of cancer since, under current standard therapy, only about 5%-10% of the cancer cells are thought to be susceptible to radiation therapy at any one point in time.

The increased sensitivity of the Multikine-treated tumors to radiation was derived from a dramatic increase in the number of proliferating (those that are in cell cycle) cancer cells. Following Multikine treatment, the great majority of the tumor cells were in a proliferative state, as measured by the well-established cell proliferation marker Ki67. The control patients (not treated with Multikine) had only low expression (near background) of the same proliferation marker (Ki67) in this study. These findings were statistically significant (p