

# SECURITIES AND EXCHANGE COMMISSION

## FORM 424B3

Prospectus filed pursuant to Rule 424(b)(3)

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### FILER

#### MEDICALCV INC

CIK: **1144284** | IRS No.: **411717208** | State of Incorporation: **MN** | Fiscal Year End: **0430**  
Type: **424B3** | Act: **33** | File No.: **333-116394** | Film No.: **06513861**  
SIC: **3841** Surgical & medical instruments & apparatus

#### Mailing Address

9725 SOUTH ROBERT TRAIL  
INVER GROVE HEIGHTS MN  
55077

#### Business Address

9725 SOUTH ROBERT TRAIL  
INVER GROVE HEIGHTS MN  
55077  
6514523000



**Prospectus Supplement No. 16**

(to Prospectus dated May 12, 2005)

This Prospectus Supplement No. 16 supplements and amends the Prospectus dated May 12, 2005, as supplemented and amended by Supplement No. 1 thereto dated May 20, 2005, Supplement No. 2 thereto dated June 14, 2005, Supplement No. 3 thereto dated July 15, 2005, Supplement No. 4 thereto dated July 21, 2005, Supplement No. 5 thereto dated July 25, 2005, Supplement No. 6 thereto dated August 9, 2005, Supplement No. 7 thereto dated August 25, 2005, Supplement No. 8 thereto dated September 14, 2005, Supplement No. 9 thereto dated September 23, 2005, Supplement No. 10 thereto dated November 8, 2005, Supplement No. 11 thereto dated December 7, 2005, Supplement No. 12 thereto dated December 14, 2005, Supplement No. 13 thereto dated December 22, 2005, Supplement No. 14 thereto dated December 29, 2005, and Supplement No. 15 thereto dated December 30, 2005 (collectively, the "Prospectus"), relating to the sale from time to time of up to 8,496,887 shares of our common stock by certain selling shareholders.

On January 5, 2006, we filed with the U.S. Securities and Exchange Commission the attached Form 10-QSB/A relating to our fiscal period ended July 31, 2005. The attached information supplements and supersedes, in part, the information contained in the Prospectus.

This Prospectus Supplement No. 16 should be read in conjunction with the Prospectus and is qualified by reference to the Prospectus except to the extent that the information in this Prospectus Supplement No. 16 supersedes the information contained in the Prospectus.

Our shares of common stock are quoted on the OTC Bulletin Board and trade under the ticker symbol "MDCV." On January 4, 2006, the closing price of a share on the OTC Bulletin Board was \$1.05.

**Investing in our common stock involves a high degree of risk.**  
See "Risk Factors" beginning on page 6 of the Prospectus dated May 12, 2005.

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this Prospectus Supplement No. 16 is truthful or complete. Any representation to the contrary is a criminal offense.**

**The date of this Prospectus Supplement No. 16 is January 5, 2006.**

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

# FORM 10-QSB/A

- QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE QUARTERLY PERIOD ENDED JULY 31, 2005**
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number 0-33295

## MedicalCV, Inc.

(Exact Name of Small Business Issuer as Specified in Its Charter)

**Minnesota**  
(State or Other Jurisdiction  
of Incorporation or Organization)

**41-1717208**  
(I.R.S. Employer  
Identification No.)

**9725 South Robert Trail**  
**Inver Grove Heights, Minnesota 55077**  
**(651) 452-3000**

(Address of Principal Executive Offices and Issuer's  
Telephone Number, including Area Code)

Check whether the issuer: (1) filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the past 12 months (or 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  No

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

As of September 13, 2005, the issuer had outstanding 11,353,333 shares of common stock and 17,785 shares of convertible preferred stock.

Transitional Small Business Disclosure Format (check one)  Yes  No

### PURPOSE OF AMENDMENT

The following Part I item is being amended in this Form 10-QSB/A: Item 1. This amendment is being filed to disclose the nature and effect of a previously disclosed amendment to our financial statements within footnote 4 to the financial statements contained herein.



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**PART I**

**FINANCIAL INFORMATION**

**ITEM 1            FINANCIAL STATEMENTS**

**MEDICALCV, INC.  
Balance Sheets**

	<u>July 31,</u> <u>2005</u>	<u>April 30,</u> <u>2005</u>
	<u>(unaudited)</u>	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 8,883,804	\$ 10,637,796
Prepaid expenses and other assets	191,384	199,978
Current assets of discontinued operations	<u>432,182</u>	<u>875,648</u>
Total current assets	9,507,370	11,713,422
Property, plant and equipment, net		
	1,010,317	827,791
Deferred financing costs, net	56,407	58,226
Other long-term assets	30,798	30,798
Non-current assets of discontinued operations	<u>367,799</u>	<u>367,799</u>
Total assets	<u>\$ 10,972,691</u>	<u>\$ 12,998,036</u>
<b>LIABILITIES AND SHAREHOLDERS' DEFICIT</b>		
Current liabilities:		
Accounts payable	\$ 108,550	\$ 399,588
Current portion of related party lease obligations	314,005	311,155
Accrued expenses	267,908	179,095

Current liabilities of discontinued operations	16,300	202,595
Total current liabilities	706,763	1,092,433
Fair value of puttable warrants	21,538,671	27,992,609
Related party lease obligations, less current portion	2,786,564	2,824,977
Total liabilities	\$ 25,031,998	\$ 31,910,019

#### Commitments and contingencies

5% series A, convertible preferred stock; \$.01 par value; 19,000 shares authorized; 17,785 and 18,035 shares issued and outstanding as of July 31, 2005 and April 30, 2005, respectively	-	-
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#### Shareholders' deficit:

Common stock; \$.01 par value; 95,000,000 shares authorized; 11,353,333 and 10,849,583 shares issued and outstanding as of July 31, 2005 and April 30, 2005, respectively	108,533	108,496
Additional paid-in capital	23,387,565	23,386,478
Accumulated deficit	(37,555,405)	(42,406,957)
Total shareholders' deficit	(14,059,307)	(18,911,983)
Total liabilities and shareholders' deficit	\$ 10,972,691	\$ 12,998,036

The accompanying notes are an integral part of these financial statements.

**MEDICALCV, INC.**  
**Statements of Operations**  
**(unaudited)**

	<u>Three months ended July 31,</u>	
	<u>2005</u>	<u>2004</u>
Operating expenses, continuing operations:		
Sales and marketing	\$ 105,217	\$ -
General and administrative	763,329	868,785
Research and Development	403,225	-
Engineering and regulatory	-	312,210
Total operating expenses	1,271,771	1,180,995
Loss from operations	(1,271,771)	(1,180,995)
Other income (expense):		
Decrease in warrant liability	6,453,938	-
Interest income	68,962	2,840
Interest expense	(79,036)	(180,420)
Other income (expense)	1,060	312
Total other income (expense)	6,444,924	(177,268)
Income (loss) from continuing operations	5,173,153	(1,358,263)
Income (loss) from discontinued operations	(102,969)	103,607
Net Income (loss)	\$ 5,070,184	\$ (1,254,656)

#### Basic and dilutive loss to common shareholders

Net income (loss)	\$	5,070,184	\$	(1,254,656)
Convertible preferred stock dividends		(218,633)		–
Net income (loss) to common shareholders	\$	<u>4,851,551</u>	\$	<u>(1,254,656)</u>
Earning (loss) per share - Continuing operations				
Basic	\$	0.47	\$	(0.14)
Diluted		(0.06)		(0.14)
Earning (loss) per share - Discontinued operations				
Basic		(0.01)		0.01
Diluted		(0.01)		0.01
Earnings (loss) per share				
Basic		0.44		(0.13)
Diluted		(0.07)		(0.13)
Weighted average shares used				
Basic		11,024,420		9,489,670
Diluted		21,393,743		9,489,670

The accompanying notes are an integral part of these financial statements.

**MEDICALCV, INC.**  
**Statements of Cash Flows**  
**(unaudited)**

	<u>Three months ended July 31,</u>	
	<u>2005</u>	<u>2004</u>
Cash flows from operating activities:		
Net income (loss)	\$ 5,070,184	\$ (1,254,656)
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Depreciation	56,248	80,247
Increase (decrease) in warrant liability	(6,453,938)	–
Provision for inventory obsolescence	–	10,250
Stock-based compensation	–	452
Interest and other income (expense) related to issued warrants and amortization of loan origination costs	–	14,294
Changes in assets and liabilities:		
Accounts receivable	–	111,245
Inventories	–	(3,115)
Prepaid expenses and other assets	453,788	52,535
Accounts payable	(291,039)	(191,802)
Accrued expenses	(97,482)	363,692
Net cash used in operating activities	<u>(1,262,239)</u>	<u>(816,858)</u>
Cash flows from investing activities:		
Purchase of property, plant and equipment	(238,682)	(7,129)

Proceeds from the sale of property, plant and equipment	–	(152,500)
Net cash used in investing activities	(238,682)	(159,629)
Cash flows from financing activities:		
Payments of term debt	–	(500,000)
Deferred financing costs	–	10,920
Proceeds from the issuance of common stock and warrants, net of offering costs	–	2,002,907
Preferred dividend paid	(218,633)	–
Proceeds from option exercise	1,125	–
Principal payments under related party lease obligations	(35,563)	(37,928)
Net cash provided by (used in) financing activities	(253,071)	1,475,899
Net increase (decrease) in cash and cash equivalents	(1,753,992)	499,412
Cash and cash equivalents at beginning of year	10,637,796	659,856
Cash and cash equivalents at end of period	\$ 8,883,804	\$ 1,159,268
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ 79,035	\$ 112,829

The accompanying notes are an integral part of these financial statements.

## MEDICALCV, INC.

### Notes to Financial Statements

#### (1) Basis of Financial Statement Presentation

The accompanying unaudited financial statements included herein have been prepared by MedicalCV, Inc. (the “Company”) in accordance with accounting principles generally accepted in the United States of America for interim financial information and pursuant to the rules and regulations of the Securities and Exchange Commission. Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted pursuant to such rules and regulations. These interim financial statements should be read in conjunction with the financial statements and the notes thereto included in the Company’s Annual Report on Form 10-KSB, as amended, for the fiscal year ended April 30, 2005.

The balance sheet as of July 31, 2005, the statements of operations for the three months ended July 31, 2005 and 2004, and the statements of cash flows for the three months ended July 31, 2005 and 2004 include, in the opinion of management, all adjustments, consisting solely of normal recurring adjustments, necessary for a fair presentation of the financial results for the respective interim periods and are not necessarily indicative of results of operations to be expected for the entire fiscal year ending April 30, 2006.

#### (2) Going Concern

The Company’s financial statements for the quarter ended July 31, 2005, have been prepared on a going concern basis, which contemplates the realization of assets and settlement of liabilities and commitments in the normal course of business. The Company has sustained losses and negative cash flows from operations in recent years and expects these conditions to continue for the foreseeable future. At July 31, 2005, the Company had an accumulated deficit of \$37,555,405. Although the Company raised funds through the sale of convertible preferred stock in the last quarter of fiscal year 2005, the level of cash required for operations during fiscal year 2006 is difficult to predict, and management anticipates that development of its new products will require additional capital by October 2006. These matters raise substantial doubt about

the Company's ability to continue as a going concern. Management intends to seek additional debt or equity financing as it continues development of new products. However, the Company may not be able to obtain such financing on acceptable terms or at all. If the Company is unable to obtain such additional financing, it will be required to significantly revise its business plans and drastically reduce operating expenditures such that it may not be able to develop or enhance its products, gain market share in the United States of America or respond to competitive pressures or unanticipated requirements, which could seriously harm its business, financial position and results of operations.

The Company is subject to risks and uncertainties common to medical technology-based companies, including rapid technological change, new product development and acceptance, actions of competitors and regulators, dependence on key personnel and market penetration.

### (3) Stock-Based Compensation

The Company accounts for stock-based employee compensation arrangements in accordance with the provisions of Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," and related interpretations and complies with the disclosure provisions of Statement of Financial Accounting Standards (SFAS) No. 123, "Accounting for Stock-Based Compensation" and SFAS No. 148 "Accounting for Stock-Based Compensation-Transition and Disclosure, an amendment of SFAS Statement No. 123."

In December 2004, the Financial Accounting Standards Board (FASB) issued a revised FAS No. 123, "Share-Based Payment (revised 2004)" (FAS No. 123R), which supersedes APB No. 25 and amends FAS No. 123 to require companies to expense the value of stock-based compensation plans. Additionally, FAS 123R, once adopted, disallows the use of the prospective transition method permitted by FAS No. 148. FAS 123R is effective as of the beginning of the first interim or annual reporting period that begins after June 15, 2005 (i.e., the beginning of the Company's fiscal year 2006).

For purposes of the pro forma disclosures below, the estimated fair value of the options is amortized to expense over the options' vesting period. Had compensation cost for the Company's stock options been recognized based on the fair value at the grant date consistent with the provisions of SFAS No. 123, the Company's net income (loss) would have been adjusted to the pro forma amounts indicated below:

	Three months ended July 31,	
	2005	2004
Net income (loss) to common shareholders	\$ 4,851,551	\$ (1,254,656)
Less: Pro forma stock based employee compensation cost	(382,181)	(43,501)
Net income (loss) – pro forma	<u>\$ 4,469,370</u>	<u>\$ (1,298,157)</u>
Basic earnings (loss) per share		
As reported	\$ .44	\$ (.13)
Pro forma	.41	(.13)
Diluted earnings (loss) per share		
As reported	(.07)	(.14)
Pro forma	(.09)	(.14)

### (4) Earnings (loss) per Share

Earnings (loss) per share is computed under the provisions of SFAS No. 128, "Earnings Per Share." Basic earnings (loss) per common share is computed using net income (loss) and the weighted-average number of shares of common stock outstanding. Diluted earnings (loss) per share reflects the potential dilution of securities that could share in the earnings of an entity. Diluted net loss per common share does not differ from basic net loss per common share in the three-month period ended July 31, 2004 since the potentially dilutive shares are anti-



dilutive to net loss per share. Potentially dilutive shares excluded from the calculation of diluted net loss per share related to outstanding stock options and warrants totaling 5,151,188 in 2005 and outstanding stock options and warrants totaling 1,761,714 in 2004.

	<u>Three months ended July 31,</u>	
	<u>2005</u>	<u>2004</u>
Net income (loss) to common shareholders for basic (loss) earnings per share	\$ 4,851,551	\$ (1,254,656)
Effect of dilutive securities:		
Decrease in warrant liability	(6,453,938)	-
Net income (loss) to common shareholders for diluted (loss) earnings per share	<u>\$ (1,602,387)</u>	<u>\$ (1,254,656)</u>

	<u>Three months ended July 31,</u>	
	<u>2005</u>	<u>2004</u>
Weighted average shares for basic (loss) earnings per share	11,024,420	9,489,670
Effect of dilutive securities:		
Shares issuable under warrant agreements	10,369,323	-
Weighted average shares for diluted (loss) earnings per share	<u>21,393,743</u>	<u>9,489,670</u>

The Company restated dilutive earnings (loss) per share from continuing operations for the three months ended July 31, 2005, to correct a computational error. The effect of the restatement was to decrease dilutive earnings per share from continuing operations by \$0.30. This change had no impact on net income available to common shareholders for the three months ended July 31, 2005, or total shareholder deficit at July 31, 2005.

## (5) Discontinued Operations

On November 18, 2004, the Company's board of directors voted to authorize management to cease production of heart valves but to continue marketing the valves while exploring the merits of possible strategic alternatives for the heart valve business, including, but not limited to, a joint venture with another party or the sale of the business. Following exploration of a number of alternatives, management concluded in April 2005 that an orderly winding up of the valve business was the Company's best alternative. On April 6, 2005, the Company's board authorized management to discontinue sales of heart valves effective April 30, 2005, and to seek a buyer for the related production equipment.

As a result of the Company's discontinuance of the heart valve business, the Company made a determination during the fourth quarter of fiscal year 2005 that the remaining assets of the heart valve operations should be considered "held for sale" pursuant to SFAS No. 144, "Accounting for Impairment or Disposal of Long-Lived Assets." (SFAS No. 144) Pursuant to SFAS No. 144, the Company ceased depreciation of property and equipment held for sale and evaluated whether any of the long-lived assets of the discontinued heart valve business were impaired. Based upon the estimated selling prices of these assets, management concluded that the carrying value of these assets was not

impaired. As of July 31, 2005 and April 30, 2005, the carrying value of the remaining net assets of the heart valve business is reported as assets of discontinued operations on the Company's balance sheet. In connection with this decision to discontinue the sale of heart valves, the Company reduced the carrying value of certain excess inventories, resulting in a provision recorded during fiscal year 2005 of \$2,573,656. This provision was included in the 2005 loss from discontinued operations.

Valve business revenue and loss before income taxes included in discontinued operations are as follows:

	For Three Months Ended July 31,	
	2005	2004
Revenues	\$ 338,333	\$ 795,503
Income (loss) before income taxes	\$ (102,969)	\$ 103,607

The carrying amounts and major classes of the assets and liabilities, which are presented as assets and liabilities of discontinued operations on the accompanying balance sheet as of July 31, 2005 and April 30, 2005, are as follows:

	July 31, 2005	April 30, 2005
<b>ASSETS</b>		
Accounts receivable, net of allowance of \$13,974 and \$196,521 at July 31, 2005 and April 30, 2005, respectively	\$ 364,913	\$ 557,291
Inventories	–	228,665
Prepaid expenses	67,269	89,692
Total current assets of discontinued operations	<u>\$ 432,182</u>	<u>\$ 875,648</u>
Property, plant and equipment, net	\$ 188,145	\$ 188,145
Other long-term assets	179,654	179,654
Total non-current assets of discontinued operations	<u>\$ 367,799</u>	<u>\$ 367,799</u>
<b>LIABILITIES</b>		
Accounts payable	\$ 6,000	\$ 192,295
Accrued expenses	10,300	10,300
Total current liabilities of discontinued operations	<u>\$ 16,300</u>	<u>\$ 202,595</u>
Net assets of discontinued operations	<u>\$ 783,681</u>	<u>\$ 1,040,852</u>

#### (6) Restructuring and Severance Charges

In the quarter ended July 31, 2004 (the first quarter of fiscal year 2005), the Company restructured its executive management team, resulting in the termination of two employees, which resulted in a charge of approximately \$214,000 to general and administrative expenses. This charge represented the amount of future severance payments due to these former employees. During the quarter ended October 31, 2004, the Company terminated an additional five employees in an effort to reduce operating costs. This restructuring resulted in approximately \$46,000 of additional severance costs, which were charged to general and administrative expense. In the quarter ended January 31, 2005, the Company terminated an additional eleven employees resulting in approximately \$48,000 of severance costs charged to general and administrative expense. During the quarter ended July 31, 2005 (the first quarter of fiscal year 2006) the Company entered into a separation agreement with an employee, resulting in a charge to general and administrative expense for severance pay of \$40,382. The Company expects to pay all amounts due to these former employees by September 30, 2005. As of July 31, 2005, \$27,802 remained accrued but not paid.

	<u>Total</u>
Restructuring charges fiscal year 2005	\$ 308,000
Cash usage fiscal year 2005	(283,166)
Balance as of April 30, 2005	\$ 24,834
Severance charges first quarter of fiscal year 2006	40,382
Cash usage first quarter of fiscal year 2006	<u>(37,414)</u>

**(7) Equity Sale**

During the fourth quarter of fiscal year 2004 and the first quarter of fiscal year 2005, the Company completed the private sale of 2,730,763 units for \$1.47 per unit. Each unit consisted of one share of common stock and one five-year warrant to purchase a common share for \$1.60 per share. Proceeds from the offering, net of offering costs of \$452,892, were \$3,561,330. In addition to cash commissions included in the offering costs, the Company issued to the private placement agent and finder five-year warrants to purchase an aggregate of 218,461 units at \$1.8375 per unit. As a result of anti-dilution adjustments through July 31, 2005, these warrants are exercisable for 599,137 units at \$0.67 per unit.

**Preferred Stock**

On April 1, 2005, under the terms of a Securities Purchase Agreement with accredited investors, the Company issued 18,035 shares of 5% Series A Convertible Preferred Stock to such investors, warrants for the purchase of 27,052,500 shares of common stock to such investors exercisable at \$0.50 per share, and warrants for the purchase in the aggregate of 1,635,960 shares of common stock to the placement agent and finder exercisable at \$0.50 per share. These warrants have a term of five years. The preferred stock, which is non-voting, has a stated value of \$1,000 and accrues cumulative dividends at a rate of 5 percent of this stated value annually. Dividends are payable quarterly but may, at the option of the Company, be added to the stated value rather than paid in cash, if certain conditions are met. Each share of preferred stock is convertible into the number of shares of common stock equal to the \$1,000 stated value divided by \$0.50, subject to anti-dilution adjustments. As a result, the 18,035 preferred shares sold may be converted into 36,070,000 shares of common stock, subject to anti-dilution adjustments. As of July 31, 2005, there were 17,785 preferred shares outstanding.

In certain circumstances, the Company may have the option to require the preferred stockholders to convert their shares into common stock. In the event of a fundamental transaction, as defined, the preferred shareholders have the right to require the Company to redeem the preferred shares at their stated value, including any accrued but unpaid dividends. In the event of certain defaults, the preferred shareholders have the right to require the Company to redeem the preferred shares at 110 percent their stated value, including any accrued but unpaid dividends. As a result of these redemption provisions, the carrying value of these preferred shares is considered to be redeemable and is reported as a "mezzanine" instrument on the Company's balance sheet beginning on April 30, 2005. The aggregate liquidation value of these redeemable preferred shares at July 31, 2005 was \$17,959,116. However, the carrying value of this redeemable preferred stock is zero, net of a discount associated with the warrants issued to the shareholders, the placement agent and the finder, as described below.

The Company is required to register the common shares underlying the preferred stock conversion option and the purchaser warrants. If the Company does not meet certain registration deadlines, the preferred stockholders will be entitled to liquidated damages, as defined. In the event of a fundamental transaction, as defined, the warrants issued to the preferred shareholders, the placement agent and the finder, all provide the warrant holders with the right to put the warrants to the Company for cash in an amount equal to the fair value of the warrants, as determined using the Black Scholes option pricing model. As a result of this put right, the warrants are reported at their fair value as a liability on the Company's balance sheet beginning on April 30, 2005, and future changes in the fair value of the warrant will result in charges or benefits to the Company's results of operations. The fair value of these warrants upon closing of the preferred stock sale was \$22,271,047. Because the fair value of these warrants at April 30, 2005, exceeded the proceeds received in the preferred stock and warrant issuances, the excess of the fair value of the warrants over the proceeds received (including the converted debt) was recognized as an interest charge of

\$4,266,047 upon closing. During the period between closing and April 30, 2005, the fair value of these warrants increased to \$27,992,609. The Company reported this \$5,721,562 increase in fair value as other expense in the fourth quarter of fiscal year 2005. During the quarter ended July 31, 2005, the fair value of these warrants decreased to \$21,538,671. The Company reported this \$6,453,938 decrease in fair value as a decrease in warrant liability in other income (expense) in the first quarter of fiscal year 2006.

The Company obtained gross cash proceeds of \$13,603,000 at the closing (net of \$30,000 in legal fees which were withheld by the lead investor). The Company also converted \$4,402,000 of indebtedness into the above-referenced securities. The Company incurred cash offering costs of \$817,980, including agent commissions, a finder's fee and out-of-pocket expense reimbursements to certain third parties. The Company also paid legal and administrative expenses of \$18,086 incurred by PKM Properties, LLC ("PKM") in this transaction. PKM is an entity controlled by Paul K. Miller. Mr. Miller serves on our Board of Directors and is our largest shareholder.

## (8) Segment Information

The Company views its operations and manages its business as one segment, the manufacturing and marketing of cardiothoracic surgery devices. Factors used to identify the Company's single operating segment include the organizational structure of the Company and the financial information available for evaluation by chief operating decision maker.

The following table summarizes net sales by geographic area:

	Three Months Ended July 31,	
	2005	2004
	(unaudited)	
Europe	\$ 279,435	\$ 353,316
Middle East	-	257,332
Far East	-	7,703
United States	58,898	168,548
Other	-	8,604
<b>TOTALS</b>	<b>\$ 338,333</b>	<b>\$ 795,503</b>

## ITEM 2 MANAGEMENT'S DISCUSSION AND ANALYSIS OR PLAN OF OPERATION

*The following discussion contains various forward-looking statements within the meaning of Section 21E of the Exchange Act. Although we believe that, in making any such statement, our expectations are based on reasonable assumptions, any such statement may be influenced by factors that could cause actual outcomes and results to be materially different from those projected. When used in the following discussion, the words "anticipates," "believes," "expects," "intends," "plans," "estimates" and similar expressions, as they relate to us or our management, are intended to identify such forward-looking statements. These forward-looking statements are subject to numerous risks and uncertainties that could cause actual results to differ materially from those anticipated. Factors that could cause actual results to differ materially from those anticipated, certain of which are beyond our control, are set forth in this document and in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended April 30, 2005, under the caption "Management's Discussion and Analysis or Plan of Operation - Cautionary Statement."*

*Our actual results, performance or achievements could differ materially from those expressed in, or implied by, forward-looking statements. Accordingly, we cannot be certain that any of the events anticipated by forward-looking statements will occur or, if any of them do occur, what impact they will have on us. We caution you to keep in mind the cautions and risks described in this document and in our Cautionary Statement and to refrain from attributing undue certainty to any forward-looking statements, which speak only as of the date of the document in which they appear.*

### Overview

Our core technology is the ATRILAZE™ Surgical Ablation System for use in cardiac tissue ablation procedures in open-heart surgery. We acquired this technology in August 2003 and received FDA 510(k) clearance in November 2004. The ATRILAZE system is currently being utilized as a potential means to treat atrial fibrillation in concomitant open-heart surgical procedures.

Atrial fibrillation, or AF, is the most commonly occurring cardiac arrhythmia. It reduces cardiac output, is a major precursor to congestive heart failure and is associated with an increased incidence of stroke. The incidence of AF increases with age. Approximately 5.5 million people worldwide are afflicted with AF. There are 320,000 new diagnoses annually worldwide. Approximately 2.5 million Americans are afflicted with AF, with 160,000 new diagnoses each year in the U.S.

With our presence in the cardiovascular surgery market, we intend to move during the next 12 to 18 months to define the market and develop a stand-alone, minimally invasive (closed-chest, beating heart) surgical procedure for ablating cardiac tissue as a potential means to treat AF.

Previously, our primary focus was on heart valve disease. We developed and marketed mechanical heart valves known as the Omnicarbon® 3000 and 4000 heart valves. In November 2004, after an exhaustive evaluation of the heart valve business, we discontinued all heart valve related production. In April 2005, we announced that our efforts to find a buyer for the heart valve business were unsuccessful and that we would stop selling heart valves and were exiting the heart valve business. At that time, we also determined to direct all of our resources to the development and introduction of products targeting the treatment of AF.

Although our ATRILAZE system is being used by cardiovascular surgeons at select centers to ablate cardiac tissue in human concomitant open-heart surgical procedures, we have not generated any revenue from these procedures. We have been providing our ATRILAZE system to these surgeons at no cost for proof-of-concept in the clinical setting, prior to commencing clinical sales of our ATRILAZE system. We expect to continue validating our technology with key cardiovascular surgeons in concomitant open-heart procedures for the first half of fiscal year 2006. We expect to begin selling hand-held devices for these procedures on a limited basis beginning in the second half of fiscal year 2006. We do not expect significant revenue until we introduce a version of our ATRILAZE system for stand-alone, minimally invasive (closed-chest, beating heart) ablation of cardiac tissue.

MedicalCV was incorporated in Minnesota on March 30, 1992, under the name CV Dynamics, Inc.

## **Quarters Ended July 31, 2005 and 2004**

### **Critical Accounting Policies**

For discussion of our critical accounting policies and estimates, see our Annual Report on Form 10-KSB, as amended, for the fiscal year ended April 30, 2005.

### **Results of Operations**

*Sales and Marketing.* Sales and marketing expenses in the quarter ended July 31, 2005, were \$105,217 compared to \$0 in the same period last fiscal year. Sales and marketing expenses for the quarter ended July 31, 2004, related entirely to heart valve sales and were classified as part of discontinued operations in fiscal year 2005.

*General and Administrative.* General and administrative expenses for the quarter ended July 31, 2005, were \$763,329 compared to \$868,785 in the prior year. Included in the quarter ended July 31, 2004, was \$214,000 for severance payments while the quarter ended July 31, 2005, included \$40,382 for severance payments. Legal, accounting and other professional fees in the quarter ended July 31, 2005, increased \$41,000 compared to those expenses for the period ended July 31, 2004. Investor relations expenses in the quarter ended July 31, 2005, increased \$48,000 compared to the period ended July 31, 2004, which was mainly attributable to our enhanced communications efforts. Insurance costs for the period ended July 31, 2005, increased \$12,000 compared to the period ended July 31, 2004. Travel and entertainment expenses for the period ended July 31, 2005, increased \$53,000 compared to the period ended July 31, 2004. Decreases in recruiting expense of \$25,000, and amortization expenses of \$78,000 in the quarter ended July 31, 2005, compared to the period ended July 31, 2004, account for the remaining decrease in overall general and administrative expenses for the quarter ended July 31, 2005, compared to the period ended July 31, 2004.

*Research and Development / Engineering and Regulatory.* Consistent with our decision to exit the heart valve business and focus on our ATRILAZE product, we have included our Engineering and Regulatory expenditures in Research and Development for the quarter ended

July 31, 2005. As a result of this, research and development expenses for the quarter ended July 31, 2005, were \$403,225 compared to \$0 in the prior year. Engineering and regulatory expenses for the quarter ended July 31, 2005, were \$0 compared to \$312,210 in the prior year.

*Other (Expense) Income.* Interest expense totaled \$79,036 in the quarter ended July 31, 2005, compared to \$180,420 in the comparable period last fiscal year. The decrease in interest expense in the first quarter of fiscal year 2006 was due to the decreased amount of borrowings outstanding after our recent financing activity. Due to the decrease in our stock price at July 31, 2005, we recorded a reduction to the fair value of our warrant liability of \$6,453,938 during the quarter ended July 31, 2005. The accounting for the warrants issued in connection with our April 1, 2005, preferred stock sale is discussed more fully in Liquidity and Capital Resources on the following pages. We also expensed dividends on our preferred stock totaling \$218,633 during the quarter ended July 31, 2005.

*Income Tax Provision.* In light of our history of operating losses, we have historically recorded a valuation allowance to fully offset our deferred tax assets. We have continued to provide a full valuation allowance through the first quarter of fiscal year 2006 due to the inherent uncertainty about our ability to generate the sufficient taxable income to realize these deferred tax assets. We have recorded no tax provision in the current period due to net operating losses generated for income tax reporting purposes.

## Liquidity and Capital Resources

Cash and cash equivalents decreased to \$8,883,804 at July 31, 2005, from \$10,637,796 at April 30, 2005. This decrease in cash and cash equivalents of \$1,753,992 was due to the following:

Net cash used in operating activities	\$ (1,262,239)
Net cash used in investing activities	(238,682)
Net cash used in by financing activities	<u>(253,071)</u>
Net decrease	<u>\$ (1,753,992)</u>

Net cash used in operating activities increased \$445,381 to \$1,262,239 in the quarter ended July 31, 2005, from \$816,858 in the quarter ended July 31, 2004. The use of cash in operations in the first quarter of fiscal year 2005 was primarily due to net losses of \$1,602,386, before the non-cash adjustment to the fair value of the warrant liability. The use of cash in operations in the first quarter of fiscal year 2004 was primarily due to net losses of \$1,254,656.

Net cash used in investing activities was \$238,682 in the quarter ended July 31, 2005. This was attributable to purchases of equipment to be used in the clinical studies for our atrial fibrillation product and the purchase of a new computer and accounting system as well as computer upgrades for research and administrative personnel. Net cash used in investing activities was \$159,629 in the quarter ended July 31, 2004. This was attributable to a purchase of equipment to be used in the clinical studies for our atrial fibrillation product.

Net cash used by financing activities was \$253,071 in the quarter ended July 31, 2005, and consisted mainly of principal payments on the related party lease obligation of \$35,563 and the payment of the preferred dividend of \$218,633. Net cash provided by financing activities was \$1,475,899 in the quarter ended July 31, 2004, and consisted of net proceeds from the sale of common stock of \$2,002,907, offset by principal payments on related parties leases of \$37,928, and payments on term debt of \$500,000.

Throughout fiscal year 2004 and in the first quarter of fiscal year 2005, we entered into a number of financing transactions to provide funds necessary to meet our working capital and capital expenditure needs and to meet other obligations. Details of these activities are contained in our annual report on Forms 10-KSB, as amended, for the year ended April 30, 2005. With the exception of the related party sale leaseback, all term debt and lines of credit were converted to equity or repaid on April 1, 2005, as part of the close on the \$18 million financing described below.

On April 4, 2003, we sold our corporate headquarters, manufacturing facility and surrounding land in Inver Grove Heights, Minnesota, to PKM Properties, LLC ("PKM"), an entity controlled by Paul K. Miller. Mr. Miller serves on our Board of Directors and is our largest shareholder.

In connection with the transaction, we received total consideration of \$3.84 million consisting of (i) \$1.0 million in cash, (ii) PKM's assumption of our \$2.5 million outstanding indebtedness to Associated Bank, and (iii) PKM's assumption of our promissory note with Dakota Electric Association and land special assessments payable to Dakota County aggregating \$336,105. Also in connection with the transaction, we issued to PKM a five-year warrant for the purchase of 350,000 shares of our common stock at an exercise price of \$0.625 per share. As a result of anti-dilution adjustments through July 31, 2005, this warrant is exercisable for 420,673 shares at \$0.52 per share. These warrants had an allocated fair value of \$89,602. We determined the fair value of the warrants using the Black Scholes option pricing model.

Simultaneous with the sale of the facility, we entered into a lease with PKM to lease back the facility and a portion of the land. The lease has a ten-year initial term with options for us to extend the lease up to ten additional years. Under certain conditions, we also have an option to purchase the building at the end of the initial ten-year term at the fair value at that time.

Due to our continued involvement with the property including the ability to buy back the property at a future date, the transaction is accounted for as a financing of the property sold and leased back. Accordingly, the net book value of the facility and land sold to PKM with a net book value of \$707,015 (gross value of \$1,433,601 net of

accumulated depreciation of \$726,586) continues to be presented as part of our property, plant and equipment balance. The related party lease obligation represents the minimum amounts due PKM for the initial ten year term discounted at 4.4 percent and additional payments to be paid to PKM for the Dakota Electric Association and Dakota County obligations assumed by PKM.

On April 1, 2005, under the terms of a Securities Purchase Agreement with accredited investors, we issued 18,035 shares of 5% Series A Convertible Preferred Stock to such investors, warrants for the purchase of 27,052,500 shares of common stock to such investors, and warrants for the purchase in the aggregate of 1,635,960 shares of common stock to the placement agent and finder. Each share of preferred stock is convertible into the number of shares of common stock equal to the \$1,000 stated value divided by \$0.50, subject to anti-dilution adjustments. As a result, the 18,035 preferred shares sold may be converted into 36,070,000 shares of common stock, subject to anti-dilution adjustments. As of July 31, 2005, there were 17,785 preferred shares outstanding.

The preferred stock, which is non-voting, has a stated value of \$1,000 and accrues cumulative dividends at a rate of 5 percent of this stated value annually. Dividends are payable quarterly but may, at our option, be added to the stated value rather than paid in cash, if certain conditions are met. The preferred stock, including any accrued dividends, are convertible, at the option of the holders, into shares of common stock at a conversion price of \$0.50 per share. In certain circumstances, we may have the option to require the preferred stockholders to convert their shares into common stock. In the event of a fundamental transaction, as defined, the preferred shareholders have the right to require us to redeem the preferred shares at their stated value, including any accrued but unpaid dividends. In the event of certain defaults, the preferred shareholders have the right to require us to redeem the preferred shares at 110 percent their stated value, including any accrued but unpaid dividends. As a result of these redemption provisions, the carrying value of these preferred shares is considered to be redeemable and is reported as a "mezzanine" instrument on our balance sheet beginning on April 30, 2005. The aggregate liquidation value of these redeemable preferred shares at July 31, 2005, was \$17,959,116. However, the carrying value of this redeemable preferred stock at July 31, 2005, was zero, net of a discount associated with the warrants issued to the shareholders, the placement agent and the finder, as described below.

In connection with the preferred stock sale, we issued the preferred stock purchasers warrants for the purchase of 27,052,500 shares of common stock at \$0.50 per share, and we also issued warrants for the purchase of 1,635,960 common shares at \$0.50 per share to the preferred stock placement agent and finder. These warrants have a term of five years. We are required to register the common shares underlying the preferred stock conversion option and the purchaser warrants. If we do not meet certain registration deadlines, the preferred stockholders will be entitled to liquidated damages, as defined. In the event of a fundamental transaction, as defined, the warrants issued to the preferred shareholders, the placement agent and the finder, all provide the warrant holders with the right to put the warrants to us for cash in an amount equal to the fair value of the warrants, as determined using the Black Scholes option pricing model. As a result of this put right, the warrants are reported at their fair value as a liability on our balance sheet beginning on April 30, 2005, and future changes in the fair value of the warrant will result in charges or benefits to our results of operations. The fair value of these warrants upon closing of the preferred stock sale

was \$22,271,047. Because the fair value of these warrants at April 30, 2005, exceeded the proceeds received in the preferred stock and warrant issuances, the excess of the fair value of the warrants over the proceeds received (including the converted debt) was recognized as an interest charge of \$4,266,047 upon closing. During the period between closing and April 30, 2005, the fair value of these warrants increased to \$27,992,609. We have reported this \$5,721,562 increase in fair value as other expense in the fourth quarter of fiscal year 2005. During the quarter ended July 31, 2005, the fair value of these warrants decreased to \$21,538,671. We have reported this \$6,453,938 decrease in fair value as decrease in warrant liability in other income (expense) in the first quarter of fiscal year 2006.

We obtained gross cash proceeds of \$13,603,000 at the closing (net of \$30,000 in legal fees which were withheld by the lead investor). We also converted \$4,402,000 of indebtedness into the above-referenced securities. We incurred cash offering costs of \$817,980, including agent commissions, a finder's fee and out-of-pocket expense reimbursements to certain third parties. We also paid legal and administrative expenses of \$18,086 incurred by PKM in this transaction.

We expect that our operating losses and negative operating cash flow will continue through fiscal year 2006 and into fiscal year 2007 as we continue adding staff to support the development and launch of our atrial fibrillation

technology. We anticipate that our sales and marketing, general and administrative and research and development expenses will continue to constitute a material use of our cash resources. The actual amounts and timing of our capital expenditures will vary significantly depending upon progress on our product development projects and the availability of financing.

Our capital requirements may vary depending upon the timing and the success of the implementation of our business plan, regulatory, technological and competitive developments, or if:

- increased sales levels of our core products and new products are not achieved;
- operating losses exceed our projections;
- our manufacturing and development costs or estimates prove to be inaccurate; or
- we determine to acquire, license or develop additional technologies.

We cannot, however, assure you that our efforts to enter the market for treating atrial fibrillation through laser ablation will:

- be attainable;
- be profitable;
- reduce our reliance upon financing transactions; or
- enable us to continue operations.

### **Commitments and Contingent Liabilities**

*Product Liability Contingency.* In March 2005, we became aware that a patient who had been implanted with our heart valve had died. We have not received any claims related to this matter but believe that any such claim would be covered by our existing liability insurance. Based upon the expectation that insurance will cover the cost of any claims after our payment of the deductible, we do not expect the ultimate resolution of this matter to have a material effect on our financial position, results of operations or cash flows.

*Related Party Lease Obligation.* On April 4, 2003, we sold our corporate headquarters, manufacturing facility and surrounding land in Inver Grove Heights, Minnesota, to PKM. In connection with the transaction, we received total consideration of \$3.84 million consisting of (1) \$1.0



million in cash, (2) PKM's assumption of our \$2.5 million outstanding indebtedness to Associated Bank which eliminated our indebtedness to Associated Bank, and (3) PKM's assumption of our promissory note with Dakota Electric Association and land special assessments payable to Dakota County aggregating \$336,105.

We simultaneously leased back our facility pursuant to a ten-year lease, with options to renew and an option to repurchase the facility. We continue to utilize the facility as we did prior to the financing transaction. In July 2005, PKM listed the building for sale. PKM is seeking a buyer for the property to facilitate our release from the remaining eight years of the lease, thereby permitting us to relocate to a more cost-effective facility. We have an agreement with PKM that releases us from our lease if the building sells above a certain price. However, there can be no assurance the building will be sold and that we will be successful in obtaining a release from our lease.

*Clinical Studies.* We entered into agreements with several large institutions to conduct clinical studies regarding certain aspects of our Omnicarbon heart valve's clinical performance. The agreements run through fiscal year 2006. In general, recipients of clinical study payments were required to utilize our products in order to complete their studies and collect and submit data according to a study protocol. As of July 31, 2005, we had accrued, but not paid, \$10,300 for clinical study payments. In April 2005, we announced our exit from the mechanical heart valve business. We have assigned any financial responsibility for studies outside the United States to our former distributors.

*Accrued Severance.* As part of the change in our strategic plan, we have changed personnel and eliminated certain positions, we are making severance payments to former officers and employees. As of July 31, 2005, our remaining obligations totaled \$27,802. We expect to complete making these severance payments by September 30, 2005.

	<u>Total</u>
Restructuring charges fiscal year 2005	\$ 308,000
Cash usage	(283,166)
<b>Balance as of April 30, 2005</b>	<b>\$ 24,834</b>
Adjustments to provision	40,382
Cash usage first quarter of fiscal year 2006	(37,414)
<b>Balance as of July 31, 2005</b>	<b>\$ 27,802</b>

*Atrial Fibrillation Technology Purchase Agreement.* In August 2003, we entered into a technology purchase agreement with LightWave and its principals relating to the acquisition of LightWave's interests in technology consisting of a catheter/probe containing elements of optical fiber, coolant passages and other features for the purpose of delivering laser energy to the epicardial surface of the heart for treatment of atrial fibrillation. We paid LightWave an initial standstill payment consisting of 15,000 shares of our common stock, \$10,000 upon closing and an additional \$30,000 to LightWave in installments in 2004 and 2005. We will be obligated to pay \$125,000 to LightWave within 45 days after the first commercial sale of our product in the United States or Europe to two or more parties and \$385,000 within 45 days following our achievement of \$1,500,000 of cumulative gross sales of disposable products. In addition, during fiscal year 2004, we issued to LightWave a warrant for the purchase of 25,000 shares at closing and, during fiscal year 2005, a warrant for the purchase of 25,000 shares upon receiving FDA 510(k) clearance. In addition, we are obligated to issue a warrant for the purchase of 25,000 shares upon a receipt of a U.S. utility patent covering the product and a warrant for the purchase of 25,000 shares upon the first commercial sale of our product.

Following the first commercial sale, we have agreed to pay LightWave payments equal to 6 percent of net sales of the LightWave product in countries in which we obtain patent protection and 4 percent of net sales of the LightWave product in territories in which there is no patent protection. Commencing with the second year following our first commercial sale, we have agreed to pay minimum annual payments as follows:

<u>Year Following Commercialization</u>	<u>Minimum Annual Payment</u>
2	\$ 50,000
3	\$ 75,000
4	\$ 100,000

5	\$	200,000
6	\$	300,000
7	\$	350,000
8	\$	350,000
9	\$	400,000
10	\$	500,000

We are obligated to pay payments for a period of ten years following the first commercial sale. Our technology purchase agreement with LightWave contains other customary conditions, including mutual indemnification obligations. LightWave and two of its principals have agreed to certain noncompetition obligations, nondisclosure obligations, and certain obligations to assign new developments or inventions relating to the acquired technology to our company. We have agreed to use our reasonable commercial efforts to commercialize the technology within three years following the acquisition of the technology from LightWave. If we fail in any year to pay minimum annual payments, we may be obligated to grant LightWave a nonexclusive right to use the technology acquired from LightWave, or pay LightWave the difference between payments actually made and minimum payments due for a given year.

The following table summarizes our contractual obligation as of July 31, 2005:

Summary of Contractual Obligations	Payments Due By Period			
	TOTAL	Less than One Year	Two to Three Years	Four or More Years
Related Party Lease Obligation(1)	\$ 2,966,400	\$ 370,800	\$ 746,235	\$ 1,849,365
Clinical Studies	10,300	10,300	–	–
Deferred compensation	27,802	27,802	–	–
<b>TOTAL CONTRACTUAL OBLIGATIONS</b>	<b>\$ 3,004,502</b>	<b>\$ 408,902</b>	<b>\$ 746,235</b>	<b>\$ 1,849,365</b>

(1) Future payments include interest due.

### Qualitative and Quantitative Disclosures about Market Risk

We have discontinued sales of the heart valve and are focusing all of our resources on the development and introduction of our ATRILAZE Surgical Ablation System. Sales in fiscal year 2006 are not expected to be material, and we expect that any sales will be in the United States denominated in U.S. dollars. Our interest income and expenses are sensitive to changes in the general level of U.S. interest rates, particularly since our investments are in short-term instruments. In June 2005 we placed a majority of our temporarily idle cash in a fund managed by a very large brokerage firm. This fund buys, sells and holds interest rate sensitive investments. If investors in the fund tried to redeem a significant portion of their shares simultaneously, the fund might be forced to sell investments below cost and we could incur a loss of principal in addition to a reduction or loss of interest. Based on the current nature and levels of our investments and debt, however, we believe that we currently have no material market risk exposure.

Our general investing policy is to limit market and credit risk and the risk of principal loss. All liquid investments with original maturities of three months or less are considered to be cash equivalents.

### ITEM 3 CONTROLS AND PROCEDURES

We maintain a system of disclosure controls and procedures that is designed to provide reasonable assurance that information, which is required to be disclosed, is accumulated and communicated to management timely. As of the end of the period covered by this report, we

carried out an evaluation under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Exchange Act Rule 13a-15. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective.

During our most recent fiscal quarter, there has been no change in our internal control over financial reporting (as defined in Rule 13a-15(f) or 15d-15(f) under the Exchange Act) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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## PART II

### OTHER INFORMATION

#### ITEM 6 EXHIBITS

See Index to Exhibits.

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### SIGNATURES

In accordance with the requirements of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on January 5, 2006.

MedicalCV, Inc.

By /s/ Marc P. Flores  
Marc P. Flores  
President and Chief Executive Officer

By /s/ John H. Jungbauer  
John H. Jungbauer  
Vice President, Finance and  
Chief Financial Officer

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### INDEX TO EXHIBITS

<b>Exhibit Number</b>	<b>Description</b>
10.1	Amended Non-Qualified Stock Option Agreement issued to John H. Jungbauer, dated November 18, 2004. *
10.2	Lease Termination Agreement entered into by and between PKM Properties, LLC and the Company, dated June 29, 2005. *

- 10.3 Employment Agreement by and between Marc P. Flores and the Company, dated August 9, 2005 (incorporated by reference to our Current Report on Form 8-K/A, filed August 9, 2005 (File No. 000-33295)).
- 10.4 Employment Agreement by and between John H. Jungbauer and the Company, dated August 9, 2005 (incorporated by reference to our Current Report on Form 8-K/A, filed August 9, 2005 (File No. 000-33295)).
- 10.5 Form of Non-Qualified Stock Option Agreement Issued to Executive Officers and Other Key Employees (incorporated by reference to our Current Report on Form 8-K/A, filed August 9, 2005 (File No. 000-33295)).
- 31.1 Chief Executive Officer Certification pursuant to Rule 13a-14.
- 31.2 Chief Financial Officer Certification pursuant to Rule 13a-14.
- 32.1 Chief Executive Officer Certification pursuant to 18 U.S.C. Section 1350.
- 32.2 Chief Financial Officer Certification pursuant to 18 U.S.C. Section 1350.

\* Previously filed.

**EXHIBIT 31.1**

*CHIEF EXECUTIVE OFFICER CERTIFICATION PURSUANT TO RULE 13a-14*

I, Marc P. Flores, President and Chief Executive Officer of MedicalCV, Inc., certify that:

1. I have reviewed this quarterly report on Form 10-QSB, as amended, for the quarter ended July 31, 2005, of MedicalCV, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the small business issuer as of, and for, the periods presented in this report;
4. The small business issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the small business issuer and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the small business issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Evaluated the effectiveness of the small business issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - c) Disclosed in this report any change in the small business issuer's internal control over financial reporting that occurred during the small business issuer's most recent fiscal quarter (the small business issuer's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the small business issuer's internal control over financial reporting; and

5. The small business issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the small business issuer's auditors and the audit committee of small business issuer's board of directors (or persons performing the equivalent functions):

- a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the small business issuer's ability to record, process, summarize and report financial information; and
- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the small business issuer's internal control over financial reporting.

Dated: January 5, 2006

By: /s/ Marc P. Flores

Marc P. Flores

President and Chief Executive Officer

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**EXHIBIT 31.2**

*CHIEF FINANCIAL OFFICER CERTIFICATION PURSUANT TO RULE 13a-14*

I, John H. Jungbauer, Vice President, Finance and Chief Financial Officer of MedicalCV, Inc., certify that:

1. I have reviewed this quarterly report on Form 10-QSB, as amended, for the quarter ended July 31, 2005, of MedicalCV, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the small business issuer as of, and for, the periods presented in this report;
4. The small business issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the small business issuer and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the small business issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Evaluated the effectiveness of the small business issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - c) Disclosed in this report any change in the small business issuer's internal control over financial reporting that occurred during the small business issuer's most recent fiscal quarter (the small business issuer's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the small business issuer's internal control over financial reporting; and
5. The small business issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the small business issuer's auditors and the audit committee of small business issuer's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the small business issuer's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the small business issuer's internal control over financial reporting.

Dated: January 5, 2006

By: /s/ John H. Jungbauer  
John H. Jungbauer  
Vice President, Finance and  
Chief Financial Officer

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**EXHIBIT 32.1**

*CHIEF EXECUTIVE OFFICER CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350*

In connection with the Quarterly Report of MedicalCV, Inc. (the "Company") on Form 10-QSB, as amended, for the quarter ended July 31, 2005, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Marc P. Flores, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Dated: January 5, 2006

By: /s/ Marc P. Flores  
Marc P. Flores  
President and Chief Executive Officer

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**EXHIBIT 32.2**

*CHIEF FINANCIAL OFFICER CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350*

In connection with the Quarterly Report of MedicalCV, Inc. (the "Company") on Form 10-QSB, as amended, for the quarter ended July 31, 2005, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John H. Jungbauer, Vice President, Finance and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Dated: January 5, 2006

By: /s/ John H. Jungbauer  
John H. Jungbauer

