MICROFLUIDICS INTERNATIONAL CORP Form DEF 14A April 30, 2010

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of

	the Securities Exchange Act of 1934 (Amendment No.	
Filed by the Registrant ý		

Filed by a Party other than the Registrant o

Preliminary Proxy Statement

Check the appropriate box:

0

- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2)) o
- **Definitive Proxy Statement** ý
- **Definitive Additional Materials**
- Soliciting Material under §240.14a-12

MICROFLUIDICS INTERNATIONAL CORPORATION

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- ý No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
 - Title of each class of securities to which transaction applies:
 - (2) Aggregate number of securities to which transaction applies:
 - (3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):
 - (4) Proposed maximum aggregate value of transaction:
 - Total fee paid: (5)

Fee paid previously with preliminary materials.

0	Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsettin was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing						
	(1)	Amount Previously Paid:					
	(2)	Form, Schedule or Registration Statement No.:					
	(3)	Filing Party:					
	(4)	Date Filed:					

MICROFLUIDICS INTERNATIONAL CORPORATION 30 Ossipee Road Newton, Massachusetts 02464

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

To	Our	Stoc	l-hai	Idere.
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The 2010 Annual Meeting of Stockholders of Microfluidics International Corporation, a Delaware corporation (the "Company"), will be held on Wednesday, June 16, 2010 at 9:00 a.m., local time, at the offices of the Company located at 30 Ossipee Road, Newton, Massachusetts, for the following purposes:

(1) To elect six directors to serve for a one year term and until their respective successors have been duly elected and qualified.

The nominees the Board of Directors proposes to present for election are:

Michael C. Ferrara George Uveges Leo Pierre Roy Eric G. Walters Henry Kay Stephen J. Robinson

(2)
To amend the 2006 Stock Plan to increase the number of shares of common stock authorized for issuance under the 2006 Stock Plan as well as to make certain other changes described in the proxy statement.

(3) To ratify the appointment of the firm of Marcum LLP as independent auditors for the Company for the fiscal year ending December 31, 2010.

(4) To transact such other business as may properly come before the meeting and any adjournments thereof.

Only stockholders of record on the transfer books of the Company at the close of business on April 22, 2010 (the "Record Date") are entitled to notice of, and to vote at, the meeting. A list of stockholders entitled to vote at the meeting will be available for inspection during normal business hours at our corporate headquarters beginning June 6, 2010.

Any stockholder as of the Record Date who is present at the Company's annual meeting may vote in person instead of by proxy, thereby canceling any previous proxy. Also, a proxy may be revoked in writing at any time before Company's annual meeting.

All stockholders are cordially invited to attend the meeting.

By Order of the Board of Directors

/s/ George Uveges

George Uveges

Chairman of the Board of

Directors

Newton, Massachusetts April 30, 2010

IT IS IMPORTANT THAT YOUR SHARES BE REPRESENTED AT THE MEETING. WHETHER OR NOT YOU PLAN TO ATTEND THE MEETING, TO SUMBIT YOUR PROXY BY MAIL, PLEASE SIGN, DATE AND MAIL THE ENCLOSED PROXY IN THE ENCLOSED ENVELOPE, WHICH REQUIRES NO POSTAGE IF MAILED WITHIN THE UNITED STATES.

IMPORTANT NOTICE REGARDING THE INTERNET AVAILABILITY OF PROXY MATERIALS FOR THE 2010 ANNUAL MEETING

The Company's Proxy Statement for the 2010 Annual Meeting of Stockholders and Annual Report to Stockholders for the fiscal year ended December 31, 2009 are available at: www.proxyvote.com.

PROXY STATEMENT

MEETING OF STOCKHOLDERS OF MICROFLUIDICS INTERNATIONAL CORPORATION TO BE HELD ON June 16, 2010

Proxies in the form enclosed with this proxy statement are being solicited by the Board of Directors of Microfluidics International Corporation, a Delaware corporation (the "Company"), for use at the Annual Meeting of Stockholders to be held on Wednesday, June 16, 2010, at 9:00 a.m., local time, at the offices of the Company located at 30 Ossipee Road, Newton, Massachusetts 02464 and at any adjournments thereof (the "Meeting").

Only stockholders of record as of the close of business on April 22, 2010 will be entitled to notice of and to vote at the Meeting. As of that date, 10,647,728 shares of common stock, par value \$.01 per share (the "Common Stock"), of the Company were issued and outstanding and entitled to vote at the Meeting. The shares of Common Stock are the only outstanding voting securities of the Company. Stockholders are entitled to cast one vote for each share held of record.

This proxy statement and the form of proxy enclosed with this proxy statement are intended to be first mailed to stockholders on or about May 7, 2010.

All properly executed proxies returned in time to be counted at the Meeting will be voted as stated below under "Voting Procedures."

Stockholders should return properly executed proxies to the address on the proxy cards. Execution of a proxy will not in any way affect a stockholder's right to attend the Meeting and vote in person. A stockholder may revoke a proxy at any time before it is voted at the Meeting by notifying the Secretary of the Company in writing at the address set forth above, by submitting a properly executed proxy bearing a later date, or by revoking the proxy at the Meeting. Attendance at the Meeting will not by itself constitute the revocation of a proxy.

In addition to the election of directors, the stockholders will consider a vote to approve the amendments to the 2006 Stock Plan and to ratify the Audit Committee's selection of the Company's auditors, each as further described in this proxy statement. Where a choice has been specified on the proxy with respect to these matters, the shares represented by the proxy will be voted in accordance with the specification and will be voted "FOR" these matters if no specification is indicated.

The Board of Directors of the Company knows of no other matters to be presented at the Meeting. If any other matter should be presented at the Meeting upon which a vote properly may be taken, shares represented by all proxies received by the Board of Directors will be voted with respect thereto in accordance with the judgment of the persons named as attorneys in the proxies.

PROPOSAL 1

ELECTION OF DIRECTORS

Each director of the Company is elected annually and holds office for the ensuing year and until his successor has been elected and qualified. The Company's By-laws state that the number of directors constituting the entire Board of Directors shall be determined by resolution of the Board of Directors. The Board of Directors has set the number of directors at six.

On December 31, 2009, Dr. Little, our former Chairman, retired from the Board of Directors. The Board elected Mr. Uveges, a member of the Board of Directors, to the role of Chairman of the Board of Directors effective January 1, 2010. After conducting a search process consistent with the criteria regarding the selection of directors described below and based on the recommendation of the Nominating and Corporate Governance Committee, the Board appointed Henry Kay and Stephen Robinson to the Board of Directors on March 4, 2010. Our Board of Directors currently consists of George Uveges, Chairman, Michael Ferrara, our Chief Executive Officer, Henry Kay, Stephen Robinson, Leo Pierre Roy, and Eric Walters. The current terms of all of our directors will expire at the Meeting. Upon the recommendation of the Nominating and Corporate Governance Committee of our Board of Directors, the Board has nominated each of these individuals for re-election for an annual term beginning at the Meeting and expiring at our 2011 Annual Meeting, or until the election and qualification of their respective successors or their earlier removal or resignation.

The nominees have consented to be named in this proxy statement and to serve if elected. If any nominee is not available for election, proxies may be voted for another person nominated by the board, or the size of the board may be reduced.

Shares represented by any proxies received by the Board of Directors that do not provide specific instructions as to how to vote will be voted "FOR" the election of all the nominees, unless one or more nominees is unable or unwilling to serve. The Board of Directors knows of no reason why any such nominee would be unable or unwilling to serve as a director, but if such should be the case, proxies may be voted for the election of some other person as the Board of Directors may recommend in his place, or for fixing the number of directors at a lesser number. The affirmative vote of a majority of the shares present, in person or by proxy, and entitled to vote on the election of directors is required to elect each member of the Board of Directors. See "Voting Procedures."

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THE ELECTION OF MR. UVEGES, MR. FERRARA, MR. KAY, MR. ROBINSON, MR. ROY, AND MR. WALTERS AS DIRECTORS, AND PROXIES SOLICITED BY THE BOARD WILL BE VOTED IN FAVOR THEREOF UNLESS A STOCKHOLDER HAS INDICATED OTHERWISE ON THE PROXY.

Biographical Information of Directors and Executive Officers

The following biographical information is provided with respect to each of our directors and executive officers:

Name	Age	Title
Michael C. Ferrara	67	Chief Executive Officer, President and Director
Peter F. Byczko	42	Vice President of Finance and Chief Accounting Officer
William J. Conroy	54	Senior Vice President Operations and Engineering
Henry Kay	65	Director
Stephen J. Robinson	60	Director
Leo Pierre Roy	52	Director
George Uveges	62	Chairman of the Board
Eric G. Walters	57	Director
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MICHAEL C. FERRARA joined the Company on November 14, 2007 as the Chief Executive Officer and is a member of the Company's Board of Directors. Mr. Ferrara was most recently President and CEO of X-Rite Incorporated, a NASDAQ-traded company (XRIT) from 2001 to 2006. X-Rite develops manufactures and markets color management solutions for industrial, commercial and retail applications. Prior to X-Rite, Mr. Ferrara was CEO of Marine Optical Group, CEO of N.I. World Trade, a trading subsidiary of National Intergroup (formerly National Steel) and held positions of increasing seniority over an 18-year period at Westinghouse Electric Corporation. None of Mr. Ferrara's prior employers were affiliated with the Company. Mr. Ferrara currently serves on the Board of Advisors, School of Engineering, Villanova University. Mr. Ferrara has a B.S in electrical engineering from Villanova University and completed the Program for Management Development (PMD) at Harvard Business School. The Board believes that Mr. Ferrara's strong operating, operational and strategic expertise as a senior manager who has served as chief executive officer of businesses in various industries and markets, both domestic and international, whose experience contributes valuable insight to the Board, and his past service on other public company boards, gives him the qualities and skills to serve as a director.

PETER F. BYCZKO joined the Company on March 12, 2009 as the Vice President of Finance. On March 31, 2009, he was appointed as the Chief Accounting Officer of the Company. Mr. Byczko was mostly recently the Director of Financial Operations and Development at Open Solutions, a leading provider of integrated computer systems and software for financial institutions around the world. In his role as Director of Financial Operations and Development, Mr. Byczko was responsible for strategic planning and acquisitions. Prior to Open Solutions, Mr. Byczko was a Senior Project Manager for Control Solutions International, a leading provider of internal audit and risk management solutions worldwide working with clients such as CA, Hewlett-Packard, and Bristol-Myers Squibb, responsible for ensuring successful client relationships and service delivery. Mr. Byczko previously had served in various senior management positions in areas of financial reporting, acquisitions and treasury. Mr. Byczko practiced from 1989 to 1995 as a Certified Public Accountant with various national and regional accounting firms. None of Mr. Byczko's prior employers were affiliated with the Company. Mr. Byczko holds a B.S. in accounting and finance from Nichols College.

WILLIAM J. CONROY joined the Company on March 18, 2008 as Vice President Operations and Engineering. Since July 1, 2009, he has served as Senior Vice President Operations and Engineering. Prior to joining the Company, Mr. Conroy served as Director of Engineering and New Products at Optim Corporation, a Risk Management, Reliability and Quality Assurance consulting company, from January 2008 to March 2008 and Senior Vice President of Production and Operations at Remote Reality Corporation, a designer and manufacturer of next-generation intelligent video systems for the military/defense and security business sectors from January 2007 to November 2007, and as the operations manager at Northrop Grumman, Electronic Systems Division (ESD), in Canton, Massachusetts, a global defense and technology company that provides innovative systems, products, and solutions in information and services, electronics, aerospace and shipbuilding to government and commercial customers worldwide, from December 2002 to January 2007. Mr. Conroy's responsibilities at Northrop Grumman included manufacturing, production control, materials, procurement, manufacturing engineering and quality assurance. Mr. Conroy earned his Bachelor of Science degree in ceramic engineering from Alfred University. Mr. Conroy has a ceramic pigment certification from Rutgers University; German ALPS language certification from Dartmouth College; is a certified Six-Sigma-Agile Specialist from Raytheon Missile Systems; and a Lean Green Belt from Northrop Grumman Corporation. None of Mr. Conroy's prior employers were affiliated with the Company. Mr. Conroy is a member of the American Ceramic Society and the National Institute of Ceramic Engineers.

LEO PIERRE ROY has served as a Director of the Company since June 2000. Mr. Roy has more than 25 years of experience as a senior manager and consultant. Mr. Roy currently serves as a Director

and officer of Houqua & Company, a privately held environmental consulting firm. Additionally, Mr. Roy is presently a Principal and Director of Environmental and Energy Services at Vanasse Hangen Brustlin, Inc. (VHB), an engineering firm providing transportation, land development, and environmental services. Prior to joining VHB in September 2003, Mr. Roy was the Vice President and Chief Operating Officer of The Bioengineering Group, Inc., a firm engaged in consulting in the areas of erosion control, water quality, and ecological restoration from September 2000 to September 2003. Between 1998 and 2000 he served as the President of Houqua & Company, Inc. None of Mr. Roy's prior employers were affiliated with the Company. Mr. Roy's business and leadership experience, including as a chief operating officer and as a president, gives Mr. Roy the expertise and skills to serve as a director. This experience enables Mr. Roy to provide the Board with invaluable insight into a broad range of issues that impact the Company's business. Additionally, his length of service on the Board provides valuable institutional memory to the other Board members, given the changes in company management in the past two years. Mr. Roy is the Chairman of the Company's Compensation Committee and serves on the Company's Audit and Nominating and Corporate Governance Committees.

GEORGE UVEGES has served as a Director of the Company since November 2005. Mr. Uveges was appointed Chairman of the Board effective January 1, 2010. Mr. Uveges is the founder and principal in the Tallwood Group, an angel investing firm that provides financial and management advisory services in addition to investment capital. Mr. Uveges was a member of the adjunct faculty at Newbury College from 2006 to 2008. From 2001 to 2004, Mr. Uveges served as the President and Chief Executive Officer of TranXenoGen, Inc., a development-stage, publicly-held biotech company focused on developing new methods for manufacturing therapeutic proteins and a portfolio of products, including generics, a cancer treatment and antibodies. He was also a director of that company from 2001 to 2005. Prior to that, Mr. Uveges served as Chief Financial Officer at a number of companies and also practiced as a certified public accountant. None of Mr. Uveges's prior employers were affiliated with the Company. Mr. Uveges is a member of the Board of Directors of Harvard Bioscience, Inc., a publicly held developer, manufacturer and marketer of products used in life science research, where he also serves as chairman of the audit committee. Mr. Uveges, a CPA, is a Member of the American Institute of Certified Public Accountants, of the Ohio Society of CPA's, of the Financial Executives International, and of the National Association of Corporate Directors. Mr. Uveges's broad business and financial background, including his extensive experience serving on boards of public companies provide him with substantial expertise in corporate governance giving him the skills and expertise to serve as a director and Chairman of the Board and Chairman of the Company's Nominating and Corporate Governance Committee. He is a member of the Company's Audit and Compensation Committees and is a "financial expert" on the Audit Committee.

ERIC G. WALTERS has served as a Director of the Company since November 2005. Mr. Walters served as Vice President and Chief Financial Officer of AdvanSource Biomaterials Corporation (formerly known as CardioTech International, Inc.) a publicly traded company, which focuses on the development and manufacture of medical grade polymers, from October 2005 to February 2009. Prior to joining AdvanSource Biomaterials Corporation, Mr. Walters served as Vice President and Chief Financial Officer at Konarka Technologies, Inc., a developer of light-activated plastic (photovoltaic) material. Prior to joining Konarka, Mr. Walters served in various capacities at PolyMedica Corporation during a 13-year period, including Executive Vice President and Chief Financial Officer. None of Mr. Walter's prior employers were affiliated with the Company. Mr. Walters is a member of the Board of Directors of CorNova, Inc., a privately held developer of coronary stents and other medical devices. Mr. Walters is an independent industry advisor for Silverwood Partners, a member of FINRA (Financial Industry Regulatory Authority). Mr. Walters, a CPA, is a Member, American Institute of Certified Public Accountants, a Fellow of the Massachusetts Society of Certified Public Accountants, and a member in Financial Executives International. Mr. Walters' business and financial experience, including as a chief financial officer of several companies, gives him the expertise and skills to serve as

director. Mr. Walters qualifies as a "financial expert" on the Audit Committee and has served on the Company's Nominating and Corporate Governance Committees since January 11, 2010.

HENRY KAY was appointed to serve as a Director of the Company in March 2010. Mr. Kay is currently the U.S. Partner of Medica Venture Partners, a healthcare dedicated venture capital firm based in Israel. Mr. Kay served as Group Vice President of New Market Development/Strategic Planning, Endoscopy, of Boston Scientific Corporation, a publicly traded company, which focuses on the medical device industry, from 1996 to 2006. Prior to joining Boston Scientific Corporation, Mr. Kay served as Vice President, Sales and Marketing for Allergen Europe, a global eye care company, for a five-year period. None of Mr. Kay's prior employers were affiliated with the Company. Mr. Kay is the Chairman of the Board of Directors of Wadsworth Medical Technologies, a privately held medical device company targeting the wound closure market, located in Westborough, Massachusetts. Mr. Kay is a member of the Board of Directors of Smart Cells, Inc., a designer and developer of insulin products located in Beverly, Massachusetts, and Cannuflow, Inc., a privately held company located in San Jose, California, specializing in arthroscopy instruments. Mr. Kay is also a member of the Board of Directors of additional privately held medical device companies including Coolsystems, Inc., located in Alameda, California, and Cellaegis Devices, Inc., located in Toronto, Ontario. Mr. Kay's broad business experience, including his expertise in marketing and business development of life science companies and his international business experience, gives him the skills and expertise to serve as a director.

STEPHEN J. ROBINSON was appointed to serve as a Director of the Company in March 2010. Mr. Robinson is currently Vice President, SAFC Hitch at Sigma-Aldrich Corporation, a life sciences and high technology company, headquartered in St. Louis, Missouri. In 2007, Sigma-Aldrich acquired Epichem, Inc., a supplier of chemical processors to the semiconductor market located in Haverhill, Massachusetts, where Mr. Robinson served as CEO from 2005 to 2007. Prior to joining Epichem, Inc., Mr. Robinson served in various senior management roles for Rohm and Haas Company, a publicly traded manufacturer of specialty chemicals, for a ten-year period. None of Mr. Robinson's prior employers were affiliated with the Company. From 2005 to 2007, Mr. Robinson served as a member of the Board of Directors of Epichem, PLC, located in the UK. Mr. Robinson's breadth of business and operating experience, both domestically and internationally, and his knowledge of the chemical and semi-conductor industries, gives him the qualities and skills to serve as a director.

Significant Employee

THOMAI PANAGIOTOU was appointed Chief Technology Officer of the Company on July 23, 2008. Since January 1, 2005, Dr. Panagiotou held the position of Vice President of Research and Development, and joined the Company on March 31, 2003 as Director of Research and Development. Dr. Panagiotou is a Member of both the American Chemical Society, and the American Association of Pharmaceutical Scientists. Prior to joining the Company, Dr. Panagiotou served from 2000 to 2003 as Manager at Arthur D. Little, Inc., a management consulting firm. Prior to that, Dr. Panagiotou worked at TIAX, LLC, a consulting company where she was involved in the development of a pulmonary delivery device. From 1997 to 2000, Dr. Panagiotou was Principal Engineer at Physical Sciences, Inc., a company providing contract research and development services in aerospace, energy, environmental, manufacturing and medical applications. Dr. Panagiotou is 46 years old.

Certain Relationships and Related Transactions

Except as may be set forth below, we are not now, nor have we been since the beginning of 2009, a party to any transaction, nor do we contemplate entering into any proposed transaction, with any related person (which term includes any of our directors or executive officers or any immediate family member of such directors or executive officers) the value of which exceeds \$90,490 (approximately one percent (1%) of the average of our total assets at year-end for the last two completed fiscal years), and in which any related person had or will have a direct or indirect material interest.

On November 14, 2008 we entered into the Convertible Debenture and Warrant Purchase Agreement (the "Agreement") with Global Strategic Partners ("GSP"). The total amount of the Convertible Debenture is \$5,000,000 and bears interest at nine percent (9.0%) per annum payable quarterly in arrears. In connection with the Agreement with GSP, we also issued a warrant to GSP, giving it the right to purchase up to fifty percent (50%) of our outstanding common stock, on a fully diluted basis, less the number of shares of common stock into with the Convertible Debenture is convertible. *See* Footnote 12 of the table titled "Security Ownership of Certain Beneficial Owners and Management" below. During 2009, we entered into the following transactions with GSP or its affiliates:

On March 11, 2009, GSP and we amended the registration rights agreement in connection with registration of the shares underlying the Convertible Debenture and Warrant to modify the registration rights agreement to remove the then current obligation to register the shares underlying the Convertible Debenture and Warrant.

On May 4, 2009, we agreed with GSP to defer interest payments in the amount of \$337,500 that were payable in 2009 and in 2010 over eight quarterly installments beginning April 1, 2010.

In connection with the closing of our revolving line of credit with Webster Bank on October 23, 2009, we amended our Convertible Debenture and Agreement with GSP to permit the revolving line of credit as senior indebtedness and provide for certain other covenants, including a cross default provision with the revolving line of credit, and GSP agreed to subordinate the indebtedness under the Convertible Debenture and Agreement to our indebtedness to Webster Bank.

In addition, we sell products to a customer that shares common ownership with GSP. During the years ended December 31, 2009 and 2008, sales to this customer totaled approximately \$737,000 and \$79,000, respectively.

Policies and Procedures for Related Party Transactions

Our Board of Directors reviews, approves and/or ratifies all transactions involving related persons. The purpose of the review is to determine that such transactions are conducted on terms not materially less favorable to us than what would be usual and customary in transactions between unrelated persons and, in the case of transactions involving Directors, to determine whether such transactions affect the independence of a Director in accordance with the relevant rules and standards issued by the Securities and Exchange Commission (the "SEC"). Our Code of Business Conduct and Ethics provides guidance on business relations between us and our Directors, officers, and employees. On December 21, 2009, the Board of Directors adopted a new Code of Business Conduct and Ethics. The Code of Business Conduct and Ethics was filed with the SEC on December 23, 2009 with Form 8-K. The Code of Business Conduct and Ethics is available on our website at http://www.microfluidicscorp.com.

Section 16(a) Beneficial Ownership Reporting Compliance

During the fiscal year ended December 31, 2009, based solely on a review of Forms 3, 4 and 5 and amendments thereto furnished to the Company by its reporting persons, we believe that no director, officer or beneficial owner of more than ten percent of any class of securities of the Company failed to file on a timely basis any report as required by Section 16(a) of the Exchange Act during fiscal 2009, except as set forth below:

A filing of a Form 4 for Mr. Ferrara disclosing the grant of an option to purchase 50,000 shares on June 4, 2009 was filed on June 9, 2009; and

A filing of a Form 4 for Mr. Conroy disclosing the grant of an option to purchase 50,000 shares on June 4, 2009 was filed on June 9, 2009.

Board of Directors, Committees and Meetings

Board Leadership and Risk Oversight

The business and affairs of the Company are managed on a day-to-day basis by the Company's management and executive officers, under the supervision and review of the Board of Directors. The Board has overall responsibility for risk oversight, with reviews of certain areas being conducted by the relevant Board Committees that report on their deliberations to the Board. The subject of risk management is a recurring agenda item, and the Board and Committees receive management reports and meet with key management personnel and representatives of outside advisors. In addition, our Compensation Committee periodically reviews with management all the Company's compensation policies and procedures to assess the risk such policies may have on the Company. Based on this review, the Compensation Committee believes that its compensation policies and procedures are not reasonably likely to have a material adverse effect on the Company.

The Chairman of the Board presides at all meetings of the Board of Directors and is appointed annually by a majority of the Directors then in office. The Board's policy is to have a separate Chief Executive Officer and Chairman of the Board. Currently, Mr. Uveges serves as the Chairman of the Board of Directors. The Board believes that a separation of duties between the Chairman of the Board and the independence of a majority of the Board of Directors enables us to effectively oversee the management of the Company.

Directors Independence

Each of the Directors, other than Mr. Ferrara, is independent in accordance with the standards of the Securities and Exchange Commission. In accordance with the disclosure requirements of the Securities and Exchange Commission, although we are not presently listed on any national securities exchange, each of the Directors, other than Mr. Ferrara, is independent in accordance with the standards of the NYSE Amex.

Board Attendance

The Board of Directors of the Company held five meetings and acted by unanimous written consent one time during the fiscal year ended December 31, 2009. During the fiscal year ended December 31, 2009, each of the directors attended more than 75% of (i) the total number of meetings of the Board of Directors, and (ii) the total number of meetings held by all committees on which each director served, for the period during which such director held such position.

Stockholder Communications

The Company expects that each member of the Board of Directors will attend the Company's 2010 Annual Meeting of Stockholders. Last year, all the then current members of the Board of Directors personally attended the 2009 Annual Meeting of Stockholders.

Written communications from the Company's stockholders can be sent to the Board of Directors at the Company's principal business address and marked to the attention of the specific Director with which the stockholder wishes to communicate, or if not to any specified director, then to the Chairman of the Board of Directors. All stockholder communications are forwarded to the specific Director to whom it is addressed. If addressed to the Board of Directors as a whole, the Chairman of the Board of Directors reviews each communication and determines, in his judgment, whether to forward it to the

Board of Directors as a whole. This process has been adopted by a majority of the Company's independent directors.

The Nominating and Corporate Governance Committee

The Board of Directors of the Company has a standing Nominating and Corporate Governance Committee comprised of Messrs. Walters, who was appointed to serve on the Committee in January 2010 to replace Dr. Little, Roy and Uveges, who is Chairman of the Committee, each of whom is independent in accordance with the standards of the Securities and Exchange Commission. Prior to his retirement on December 31, 2009, Dr. Little also served on the Nominating and Corporate Governance Committee during fiscal 2009. In accordance with the disclosure requirements of the Securities and Exchange Commission, although we are not presently listed on any national securities exchange, each of the Directors on the Nominating and Corporate Governance Committee is independent in accordance with the standards of the NYSE Amex.

The Nominating and Corporate Governance Committee has a charter, which is reviewed annually by the Nominating and Corporate Governance Committee and the entire Board of Directors. The Nominating and Corporate governance Charter is available on the Company's website at http://www.microfluidicscorp.com.

The Nominating and Corporate Governance Committee reviews and reports to the Board of Directors on at least an annual basis regarding the size and composition of the Board and recommends to the Board nominees for election to the Board of Directors. The Nominating and Corporate Governance Committee met three times during 2009.

The Nominating and Corporate Governance Committee accepts and considers nominations by directors, executive officers, employees, advisors, consultants and security holders. The Committee may utilize outside sources or hire an outside consultant to help in the search for a new director or executive officer. Shareholders who wish to recommend nominees for directors should submit recommendations for nominations for director positions in writing to the Company's Nominating and Corporate Governance Committee, which should be mailed to the Company's principal mailing address, addressed to the attention of the Corporate Secretary. Shareholder recommendations for director nominees should include the following:

the name and address of the stockholder of record, and of the beneficial owner, recommending the person to serve as a director (If the stockholder is not a record holder, evidence of ownership in accordance with Rule 14a-8(b)(2) of the Exchange Act);

the number of shares owned beneficially and of record by the stockholder and beneficial owner;

a description of all arrangements or understandings between the stockholder, and any beneficial owner, and a proposed Director candidate;

a description of the qualifications and background of the proposed Director candidate which addresses the minimum qualifications and other criteria for Board membership.

the name, age, business and residential address, educational background, public company directorships, current principal occupation or employment, and principal occupation or employment for the preceding five full years of the proposed Director candidate:

such other information regarding the proposed Director candidate as would be required to be included in a proxy statement filed pursuant to Regulation 14A promulgated by the SEC pursuant to the Exchange Act;

the consent of the proposed Director candidate to be named in the proxy and serve as a director of the Company if so elected; and

confirmation that the proposed Director candidate has the time and is willing to devote sufficient time to fulfill his or her responsibilities to the Company and its shareholders, including to attend in person the meetings of the Board of Directors and its Committees.

When the Nominating and Corporate Governance Committee becomes aware of a vacant seat on the Board of Directors, whether because of retirement or resignation of a director or otherwise, the Nominating and Corporate Governance Committee, or a subcommittee thereof, determines the skill set and other criteria, as appropriate, required of the candidate (e.g. does the candidate need to be a financial expert), reviews all nominations received, interviews the candidates, check references and recommends whether nominees should be submitted to the full Board of Directors. This procedure is the same for all candidates, including proposed director candidates identified by shareholders. In order for a nominee to be considered by the Nominating and Corporate Governance Committee, he or she is expected to meet the following minimum criteria:

Director candidates shall have the highest personal and professional integrity;

Director candidates shall have a record of exceptional ability and judgment;

Director candidates shall have the skills and knowledge useful to the oversight of the Company and have specific skills or background that the Committee feels would strengthen the overall Board of Directors;

Director candidates must be available, able and willing to devote the required amount of time to the Company's affairs, including attending in person the Board of Directors and committee meetings;

Director candidates should have the interest, capacity and willingness, in conjunction with the other members of the Board of Directors, to assess and serve the long-term interests of the Company's stockholders; and

Director candidates shall be free of any personal or professional relationships that would adversely affect their ability to serve the best interests of the Company and its stockholders.

The Nominating and Corporate Governance Committee and the Board of Directors review all nominees on the basis of the nominee's minimum criteria set forth above and such other qualifications, skills, education, business experience and expertise, including whether the nominee's would be independent, as recommended by the Nominating and Corporate Governance Committee and approved by the Board of Directors. Although the Company does not currently have a formal policy that considers diversity in the selection of nominees, the Nominating and Corporate Governance Committee may consider whether the nominee, if elected, assists in achieving a mix of Board members that represent a diversity of background and experience. In addition, the Committee focuses on a nominee's skills, expertise, and background that would complement the existing board, recognizing the Company's products and services are sold globally to a broad range of industries, including the pharmaceutical, biotechnology, chemical, cosmetic and food industries. The Committee will also assess whether the Candidate will be deemed "independent" in accordance with the standards of the SEC and, although we are not listed on such and exchange, NYSE Amex, to assure that at all times we have a majority of independent directors on the full Board of Directors and a sufficient number of independent directors to serve on all Committees that are required to have members who are independent.

The Audit Committee

The Audit Committee, which currently consists of Messrs. Walters, Roy, and Uveges, each of whom is an independent director under the standards of the SEC, oversees the accounting, financial reporting and tax functions of the Company, including matters relating to the internal control over financial reporting and the appointment and activities of our independent accountants. The Audit

Committee is a separately designated committee established in accordance with Section 3(a)(58)(A) of the Exchange Act. In accordance with the disclosure requirements of the SEC, although we are not presently listed on any national securities exchange, each of the members of the Audit Committee is independent in accordance with the listing standards of the NYSE Amex. Mr. Walters, the Chairperson of the Audit Committee, and Mr. Uveges are each an Audit Committee "financial expert," as defined under the rules of the SEC. The Audit Committee met four times during 2009.

The Audit Committee has a charter, which is reviewed at least annually by the Audit Committee and the entire Board of Directors. The Audit Committee charter is available on the Company's website at http://www.microfluidicscorp.com.

Compensation Committee

The Compensation Committee, which currently consists of Messrs. Roy and Uveges, recommends to the Board who receives stock options under the Company's stock plans (except for grants under the 2006 Stock Plan that are automatically made to non-employee directors upon initially joining the board and annually) and also reviews and approves senior executive remuneration, including the Chief Executive Officer's remuneration, and reporting to the Board regarding the foregoing. Each of the members of the Compensation Committee is independent in accordance with the standards of the SEC. In accordance with the disclosure requirements of the SEC, although we are not presently listed on any national securities exchange, each of the members of the Compensation Committee is independent in accordance with the standards of the NYSE Amex. The Compensation Committee held five meetings during 2009. The Compensation Committee has the authority to delegate any of its responsibilities to subcommittees as the Compensation Committee may deem appropriate in its sole discretion.

The Compensation Committee has a charter which is available on the Company's website at http://www.microfluidicscorp.com.

Compensation Committee Interlocks and Insider Participation

During fiscal year ended December 31, 2009, Messrs. Roy, Uveges, and Dr. Little, who retired on December 31, 2009, served on our Compensation Committee. No member of the Compensation Committee during fiscal 2009: (i) has ever been an officer or employee of the Company or any of its subsidiaries or (ii) had any relationship with the Company or its subsidiaries that would require disclosure under Item 404 of the SEC's Regulation S-K.

During the fiscal year ended December 31, 2009, no executive officer of the Company served as a member of the compensation committee of another entity, one of whose executive officers served on the Compensation Committee of the Company; no executive officer of the Company served as a director of another entity, one of whose executive officers served on the Compensation Committee of the Company; and no executive officer of the Company served as a member of the compensation committee of another entity, one of whose executive officers served as a director of the Company.

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

This section discusses the material elements of compensation awarded to, earned by or paid to the executive officers identified in the Summary Compensation Table in this proxy statement (whom we refer to as our named executive officers).

The Compensation Committee of our Board of Directors generally has responsibility for reviewing and determining on both an annual and an as-needed basis the compensation of our named executive officers, directors, and key employees and reporting to the Board regarding the foregoing. The Board reviews and ratifies the Compensation Committee's determination with respect to compensation matters. The Compensation Committee (also referred to as the "Committee") also has responsibility for administering our stock plans, including our 2006 Stock Plan, recommending the number of stock options to be granted under the 2006 Stock Plan and reporting to the Board regarding the foregoing for ratification. The Compensation Committee also reviews and approves the terms of any employee agreements, including any agreements that provide severance or other benefits to retain key executives. None of the named executive officers are members of the Compensation Committee. During fiscal 2009, the Compensation Committee members consisted of Leo Pierre Roy (Chairman), Dr. Little and George Uveges. Dr. Little retired from the Board and the Committee on December 31, 2009.

Overview of Compensation Programs and Objectives

The objectives of the Compensation Committee in recommending the levels and components of compensation for the named executive officers and key employees are to:

- Attract, motivate and retain talented and dedicated executives and key employees;
- Motivate performance to achieve our established key performance metrics, goals and objectives; and
- Provide both cash and equity incentives that align the interests of the named executive officers and key employees with the long-term interests of our stockholders.

The Committee reviews the achievement of corporate goals and individual contributions to our Company's success by our named executive officers and our key employees. The Committee monitors the results of our executive compensation program to assure that the compensation paid to the named executive officers and key employees provides overall competitive pay levels and appropriately rewards individual and corporate performance. The Committee relies on judgment and not upon rigid guidelines or formulas in determining the amount or mix of compensation elements for each named executive officer and key employee. Factors affecting the Committee's judgment include performance compared to strategic goals, the nature of the named executive officer's or key employee's responsibilities and his or her effectiveness in leading our initiatives to achieve our goals.

Our Chief Executive Officer, as the manager of the members of the executive team, assesses the executives' and key employees' individual contributions to their respective departmental goals and makes recommendations to the Committee with respect to increases in base salary, discretionary bonus and long-term incentive awards, for each member of the executive team. The Committee evaluates, discusses and approves or modifies these recommendations. Each member of the Board who is independent in accordance with the standards of the SEC is permitted to attend the Committee meetings and participate in the discussion. However, approval of each named executive officer's and key employee's compensation is made by the Committee and recommended to the Board for ratification. The Committee reviews the total compensation package for each named executive officer and key employee, including base salary, bonuses and incentive awards, and adjusts these individual components to achieve a desired pay and performance incentive package. The Committee believes that

each element of our named executive officer and key employee compensation program helps us to achieve one or more of our compensation objectives.

The Committee believes that we need to provide the named executive officers and key employees with a level of predictable compensation in order to attract and retain top-caliber executives and key employees' and reward their continued services. To achieve this goal, the Committee provides a base salary and to encourage retention, may provide change in control benefits and related severance protection, and other customary benefits.

The Committee also believes that a certain percentage of an employee's overall compensation package should be tied to our success in achieving annual as well as longer-term financial and other performance goals. To achieve this goal, the Committee primarily awards annual discretionary cash bonuses and stock option grants. Through this mix of longer-term and short-term elements, we believe we can achieve the dual goals of attracting and retaining executives and key employees while motivating their continued performance and aligning their financial interests with those of our stockholders Our annual discretionary bonus program is tied to the achievement of our overall financial performance, as well as individual job performance, consistent with our "Pay- for-Performance" policy, which policies are designed to:

grow the Company;
increase profitability;
increase shareholder value;
improve quality;
increase customer focus;
advance the technology;
penetrate additional markets and diversify by industry and geography; and
develop employees to succeed by giving them career paths and internally developing the future leadership of the Company

In setting total compensation, the Committee has used relevant data points for comparable companies, such as salary surveys, to assist it in determining the compensation for each of our named executive officers. The Committee has found it difficult to benchmark the compensation levels of our named executive officers within a peer group of comparable companies due to the unique nature, size, and global reach of our business and technology. The Committee has evaluated the compensation practices of other high technology companies, including other publicly-held advanced materials, advanced technologies companies, and small capital equipment manufacturers, in Massachusetts, in determining an appropriate level and mix of compensation. Among other sources, the Committee used the Watson Wyatt Executive Management Survey 2007/2008, a Mercer Compensation Management Survey 2009/2008, Elmore Consulting Group Inc.'s 2009/2010 cost of living adjustment and merit information as well as analyses of benchmark job data from Salary.com.

Current Material Elements

Base Salary. The Committee customarily determines any adjustments to the base salary of each of our named executive officers at the end of the year preceding the year in which the adjustment will take effect or at the start of the year in which the adjustment will take effect. Base salary is paid in cash. The base salary that we paid to each of our named executive officers in 2009 is the amount reported for such officer in the line corresponding to 2009 under the "Salary" column of the Summary Compensation Table below. At the end of 2008, the Committee recommended to the Board that base salaries in 2009 remain at 2008 levels due to poor general economic conditions and their potential

negative effect on our financial performance for 2009. The Board adopted that position. As the year progressed, and the Company performance improved, the Committee re-evaluated its decision and approved base salary increases for certain key employees, including Mr. Conroy's, whose base salary was increased from \$150,000 to \$180,000.

Discretionary Bonuses. The Committee uses its discretion in recommending annual discretionary bonuses. That discretion includes whether to grant bonuses at all, the formula for determining the amount of the annual bonus opportunities, and the individuals eligible to receive the discretionary bonuses. Each employee eligible for a discretionary bonus is given certain Key Performance Metrics or "KRAs", which are established at the beginning of the year in discussions between the employee and his or her supervisor. Mr. Ferrara establishes the KRAs for the executive management team. The Compensation Committee establishes Mr. Ferrara's KRAs. The Compensation Committee reviews and approves the KRAs for the senior management team and uses them at year end, in consultation with Mr. Ferrara, in determining eligibility and amount of the respective discretionary bonus. The Compensation Committee may also award discretionary bonuses during the year to reward individual performance, which it did in 2009 for certain key employees as discussed below.

Discretionary bonuses, if any, for our named executive officers are paid in cash upon the achievement of certain goals. Such bonuses may be structured either as payments on an individual basis to a particular named executive officer or as payments to some or all of the named executive officers from a bonus pool to which they are entitled to a certain percentage.

Although the Company did not establish a discretionary bonus pool or plan for 2009 due to recessionary economic conditions, given the positive performance of 2009 over 2008, which included exceeding EBITDA targets of \$380,000 for 2009, the Compensation Committee awarded discretionary bonuses to the named executive officers in early 2010. In making this determination, the Committee also reviewed each individual's performance over the fiscal year and his or her achievement of individual KRAs. The bonuses, which were paid in early 2010 for 2009 performance, were paid as follows: Mr. Ferrara received \$100,000, Mr. Byczko received \$22,500, and Mr. Conroy received \$20,000. Mr. Conroy was paid a \$15,000 discretionary bonus midway through the year due to early achievement of certain individual goals.

On December 2, 2009, the Compensation Committee approved a discretionary bonus program for 2010 for senior officers, including the named executive officers, which generally ties the amount of bonus to the Company's achievement of specified financial objectives and for each participating employee, satisfactory performance of individual KRAs, based on such person's position and duties, such as the performance of the particular officer or the accomplishment of specific objectives by such officer and may include such other objective factors as the Company's profitability, revenue, cash flow, customer generation, market share and industry position. If the eligible employee achieves his or her KRAs and the Company achieves its financial objectives, as determined by the Board of Directors, he or she is eligible to receive a bonus.

Long-Term Incentive Compensation. Periodically, the Committee grants long-term incentive compensation to our named executive officers in the form of stock option grants to provide an incentive that is directly tied to the performance of our stock and as such these grants further align their interests with those of the stockholders. Vesting periods associated with such grants are used to retain our named executive officers and to emphasize the long-term aspect of contribution and performance. In making grants of long-term incentive compensation to our named executive officers, the Committee considers a number of factors, including our performance, the performance of such persons, the achievement of specific delineated goals, the responsibilities of such persons, the number of stock options and other awards each such person currently possesses and the underlying value of the options and other awards held.

Our stockholders adopted our 2006 Stock Plan on June 20, 2006. Upon the adoption of the 2006 Stock Plan, we ceased granting new options and other awards under our 1988 Stock Plan and our 1989 Non-Employee Director Plan. The Committee will continue to administer our 1988 Stock Plan and our 1989 Non-Employee Director Plan so long as awards granted under such plans remain exercisable. Under the 2006 Stock Plan, the Committee may grant awards in the form of stock options, restricted share rights, performance share rights and stock appreciation rights. Notwithstanding the flexibility of types of awards under our 2006 Stock Plan, to date the Committee has only granted stock options to its named executive officers and key employees.

The Committee may grant awards to our named executive officers or other eligible participants under our 2006 Stock Plan at any time during the year, including in connection with the hiring or promotion of employees or based upon other special circumstances or performance. We do not backdate or grant options retroactively. In addition, we do not coordinate grants of options so that they are made before announcements of favorable information, or after announcements of unfavorable information. Our options are granted at fair market value on a fixed date or event (such as the first Board meeting following an employee's hire); with all required approvals obtained in advance of or on the actual grant date.

Pursuant to the terms of the 2006 Stock Plan, stock options granted to our named executive officers usually have a term of ten years. The exercise price of these grants is 100% of the closing price of the underlying Common Stock on the date of grant. In general, the options granted to our named executive officers vest in equal annual installments over a four-year period beginning one year after the date of grant. The Committee may, in certain instances, adjust the vesting period for performance-based options. The Committee has customarily determined whether or not to grant long-term incentive compensation to our named executive officers at the end of a year or at the start of a year. The Committee adopted a new policy in 2008 to grant long-term incentive compensation based upon the named executive officers' performance after the conclusion of the year in which the performance occurred. This policy does not preclude the Committee from granting awards to the named executive officers at any other time during the year, under the appropriate circumstances. This approach provides the Committee with a retrospective view on the performance of such individuals before deciding whether to grant the incentive compensation.

In June 2009, the Committee made certain grants to Mr. Ferrara and Mr. Conroy to provide additional long-term incentives. Mr. Ferrara and Mr. Conroy were each granted an option to purchase 50,000 shares. These grants were in addition to the annual grant of an option to purchase 75,000 shares for Mr. Ferrara and an option to purchase 30,000 shares for Mr. Conroy at the beginning of the fiscal year. Mr. Byczko, who started with the Company in March 2009, was awarded an option to purchase 25,000 shares in connection with his hiring in March 2009. The Committee granted the following options in early 2010 to its named executive officers: an option to purchase 75,000 shares for Mr. Ferrara; an option to purchase 45,000 shares for Mr. Byczko; and an option to purchase 30,000 shares for Mr. Conroy. In determining the size of the option grants, the Committee reviewed the recent option grants to the each of these named executive officers, the named executive officer's contributions to the Company's performance in 2009, the overall size of the executive's compensation for 2010, and the level of long term incentive these grants would provide.

Change-in-Control Benefits and Severance Protection. The change-in-control benefits and related severance protection provided to each of our named executive officers include the provisions in our 2006 Stock Plan that provide for the acceleration or the vesting of awards under certain circumstances in the event of a change in control. Pursuant to our 2006 Stock Plan as currently constructed, outstanding stock options, restricted stock and stock appreciation rights granted to a named executive officer may be assumed by a successor corporation or accelerated if not assumed. In addition, 50% of the unvested portion of an award will accelerate if, within 12 months following a change in control, the successor corporation for a reason other than cause terminates the employment of a named executive

officer who holds an award pursuant to the 2006 Stock Plan. Please see the "Employment Agreements" section following the "Summary Compensation Table" below for a description of additional payments that may be made to certain of the named executive officers following a change in control. Under Proposal 2, the Company is seeking stockholder approval for an amendment to the 2006 Stock Plan that would provide full acceleration of all equity awards under the 2006 Stock Plan in the event of a change of control. The Committee believes that this amendment will more closely align management interests with stockholders.

Other Compensation and Benefits. Our named executive officers participate in the same group insurance and employee benefit plans as our other salaried employees. We do not provide loans or other perquisites to our named executive officers.

Employment Agreements

We have an employment agreement with Mr. Ferrara, our Chief Executive Officer and an offer letter with Mr. Byczko, our Chief Accounting Officer. These agreements provide for payments upon termination under certain circumstances and/or following a change in control, which are described more fully below under "Employment Agreements". These payments are designed to provide Mr. Ferrara and Mr. Byczko with continued compensation for a discrete period of time in situations where their employment is terminated. The Committee evaluates, from time to time, the appropriateness of offering employment agreements with severance and change of control benefits, as part of our goal of retaining key employees.

Stock Ownership Guidelines

The Company currently does not require our directors or named executive officers to own a particular amount of our Common Stock. All of our directors and the CEO are either stockholders of the Company or own options to purchase our stock granted under our 2006 Stock Plan.

Return of Incentive Compensation by an Executive

In the case of a restatement of our financial results caused by fraudulent or intentional misconduct, the Board may take action to seek reimbursement of some portion of performance-based or incentive compensation that was paid or awarded which would not have been paid or awarded if such compensation had been calculated based on the restated financial results. The Audit Committee of the Board will determine whether a financial restatement is significant and will make an initial determination of the cause of the restatement. Return of incentive compensation will be considered for all named executives and key participants in case of a restatement.

Compensation Consultant

The Committee does not have any contractual arrangement with any compensation consultant who has a role in determining or recommending the amount or form of named executive officer or director compensation. In the future, in its sole discretion, the Committee may engage or seek the advice of one or more compensation consultants.

Compliance with Internal Revenue Code Section 162(m)

The Committee currently intends for all compensation paid to our named executive officers to be tax deductible to the Company pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended ("Section 162(m)"). Section 162(m) provides that the Company cannot deduct for Federal income tax purposes compensation paid to our named executive officers in excess of \$1,000,000, unless, in general, (1) such compensation is performance-based, established by a committee of outside directors and objective, and (2) the plan or agreement providing for such performance-based

compensation has been approved in advance by stockholders. The Committee believes that stockholder interests are best served by not restricting the Committee's discretion and flexibility in crafting compensation programs, even though such programs may result in certain non-deductible compensation expenses. Accordingly, in the future, the Committee may determine to adopt a compensation program that does not satisfy the conditions of Section 162(m) if in its judgment, after considering the additional costs of not satisfying Section 162(m), such program is appropriate. However, the Committee does not anticipate paying any named executive officers in excess of \$1,000,000 in the near term.

COMPENSATION COMMITTEE REPORT

The Committee has reviewed and discussed the above Compensation Discussion and Analysis with management. Based on its review and discussions with management, the Committee recommended to the Board of Directors that the Compensation Discussion and Analysis be incorporated by reference in the Company's Annual Report on Form 10-K for 2009 and included in this proxy statement.

Leo
Pierre
Roy
(Chairman)
George
Uveges

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Summary Compensation

The following table sets forth for the fiscal years ended December 31, 2009 and 2008, respectively, a summary of the compensation paid to our named executive officers.

SUMMARY COMPENSATION TABLE FOR THE YEARS ENDED DECEMBER 31, 2009 AND 2008

Change

						,	Change		
							in		
						1	Pension		
						-	Value		
							and		
							Non-		
					N	on-Equit Q	Dualified		
				Stock		Incenti©on	-	All Other	
		Cil	D		•		•		m . 4 . 1
		Salary				•		mpensation	Total
Name and Principal Position	Year	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
Michael C. Ferrara	2009	230,000	100,000(9	9) 0	70,250(1)	0	0	3,317(2)	403,567
Chief Executive Officer	2008	230,000	0	0	0	0	0	0	230,000
Peter F. Byczko									
•	2009	115,443(10)	22,500(9	0	8,500(1)	0	0	1,506(2)	147,949
Vice President, Chief Accounting Officer	2008	0	0	0	0	0	0	0	0
William J. Conroy									
	2009	165,116	35,000(3	3) 0	44,600(1)	0	0	2,374(2)	247,090
Senior Vice President Operations and	2008	119,423(4)	0	0	60,000(5)		0	6,125(6)	185,543
Engineering	2000	117,423(4)	Ü	Ü	00,000(3)	·	Ü	0,123(0)	105,545
_									
Brian E LeClair									
	2009	47,500(7)	0	0	17,100(1)	0	0	63,284(8)	127,884
Executive Vice President, Chief Financial	2008	103,154(7)	0	0	68,800(5)	0	0	0	176,954
Officer and Treasurer (former)		,(-,	_	-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	_	-		,

- The option awards represent the grant date full value of the options granted in 2009 computed in accordance with ASC 718 with respect to stock option grants in 2009. The assumptions used in the calculation of these amounts are included in Note 1 to the Company's audited consolidated financial statements for the year ended December 31, 2009 included in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 29, 2010. Option awards were granted during 2009 to provide a long-term incentive to the named executive officers.
- (2) Other compensation represents Company's 401(k) match.
- (3) William J. Conroy discretionary bonus earned in 2009. Mr. Conroy received \$15,000 of the bonus paid in mid 2009 with the remaining \$20,000 paid in early 2010 for performance during 2009.
- (4) William J. Conroy compensation for partial year based on \$150,000 annual base salary.
- The option awards represents the grant date full value of the options granted in 2008 computed in accordance with ASC 718 with respect to stock option grants in 2008. The assumptions used in the calculation of these amounts are included in Note 1 to the Company's audited consolidated financial statements for the year ended December 31, 2008 included in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 30, 2009 and incorporated by reference herein. Option awards were granted during 2008 to provide a long-term incentive to the named executive officers.
- William J. Conroy's other compensation includes Company's 401(k) match and other miscellaneous compensation.
- Brian E. LeClair compensation for partial year based on \$190,000 annual base salary. Mr. LeClair resigned from the Company on March 31, 2009.
- (8)

 Represents payment of the following amounts to Brian E. LeClair upon departure from employment: (i) six (6) months' severance payment, and (ii) accrued vacation upon departure from employment.

(9)

(6)

(7)

Represents discretionary bonus earned in 2009 and paid in 2010.

(10)

Peter F. Byczko began working at the Company on March 12, 2009. For 2009, his annual base salary was set at \$145,000. The amount in the salary column reflects his partial year compensation.

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Employment Agreements

We have an employment agreement with Michael C. Ferrara, our chief executive officer. We also have an offer letter with Mr. Byczko.

Michael C. Ferrara

On December 4, 2009, the Company and Mr. Ferrara, its Chief Executive Officer, entered into an Amended and Restated Employment Agreement (the "Ferrara Agreement"), which amended and restated Mr. Ferrara's previous Employment Agreement with the Company dated November 14, 2007. The Ferrara Agreement is effective January 1, 2010, and is for an initial two-year period with renewals for successive one-year periods, unless terminated in accordance with the terms of the Agreement. The initial two-year period and any successive one-year renewal period are defined as the Employment Period. Under the Agreement, Mr. Ferrara will receive a base salary of \$240,000 per year, subject to increases determined by the Board in its sole discretion (the "Base Salary"). In addition to his Base Salary, Mr. Ferrara will be entitled to participate in, and may receive performance bonus payments under an annual bonus plan or plans that the Compensation Committee of the Board may establish from time to time for senior executives. Mr. Ferrara's potential performance bonus under any such performance plan for achieving 100% of the mutually agreed upon "KRAs" and/or other targets for that year shall be no less than fifty (50) percent of his Base Salary.

Mr. Ferrara is eligible to participate in the Company's employee benefits as they may exist from time to time, including health insurance, life insurance, 401k and stock purchase plans. Mr. Ferrara is eligible to earn and use four (4) weeks of paid vacation per calendar year, accruing at the rate of 1.67 days per month. The Company reimburses Mr. Ferrara for all reasonable expenses incurred by him in the course of performance of duties under the Agreement.

In the event that the Employment Period is terminated by Mr. Ferrara for other than a Good Reason (as defined in the Ferrara Agreement), by the Company for Cause (as defined in the Ferrara Agreement) or as a result of Mr. Ferrara's death or Permanent Disability (as defined in the Ferrara Agreement), the Company has no further obligation to Mr. Ferrara, other than to pay to Mr. Ferrara or his designated beneficiary, (i) any portion of the Base Salary owed to Mr. Ferrara through the date of termination, (ii) the salary corresponding to any vacation time accrued but unused through the date of termination, (iii) any amounts owed for expenses incurred prior to the date of termination that are eligible for reimbursement pursuant to the Ferrara Agreement and (iv) in the case of a termination due to death, two months salary payable in monthly installments.

If the Employment Period is terminated by the Company without Cause, by Mr. Ferrara for Good Reason or within thirty (30) days following a Change of Control (as defined in the Ferrara Agreement), or by the Company for any reason within one year of a Change of Control, Mr. Ferrara will receive payment of the amounts described in the preceding paragraph and be entitled to receive as severance following the date of termination, (i) twelve (12) months of his Base Salary (as of the effective date of such termination), payable in monthly installments, (ii) twelve (12) monthly payments of the amount that the Company would have paid in continuation of Mr. Ferrara's medical coverage if he had remained an employee of the Company, and (iii) if the termination is effective prior to the end of a calendar year, a pro-rated portion of the bonus that would have been paid to Mr. Ferrara under the Ferrara Agreement if he had remained employed until the end of such calendar year. The foregoing severance payments will be contingent on the execution by Mr. Ferrara of a general release of any claims that he may have against the Company.

Under the Ferrara Agreement, Mr. Ferrara agreed that, during the Employment Period and for a period of twelve (12) months thereafter, he will not (a) engage in, render services to, or acquire a financial interest in, any Competitive Business (as defined in the Ferrara Agreement), (b) induce any employee of the Company to leave the Company or hire certain former employees of the Company, or

(c) interfere with the relationship between the Company and any of its customers, suppliers, licensees or other business relations.

Peter F. Byczko

On March 9, 2009, the Company and Mr. Byczko entered into a Letter Agreement (the "Letter") in conjunction with Mr. Byczko's appointment as Vice President of Finance and Controller. Mr. Byczko's appointment as Vice President of Finance and Controller was effective March 12, 2009. On March 31, 2009, Mr. Byczko became the Company's Chief Accounting Officer. Under the terms of the Letter, Mr. Byczko will receive a base salary of \$145,000 per year ("Base Salary"). The Base Salary is eligible for annual review and adjustment based on comparable market data and Company and individual performance KRAs. Mr. Byczko's base salary was increased to \$165,000 effective January 1, 2010. Mr. Byczko is eligible to receive a variable bonus based on the Company's achievement of certain financial targets and his achievement of his individual KRAs. Under the discretionary bonus plan for 2010, Mr. Byczko's eligibility for a bonus was increased from \$20,000 to \$35,000. Mr. Byczko is also eligible to participate in the Company's employee benefits as they may exist from time to time, including health insurance, life insurance, 401(k) and stock purchase plans. Mr. Byczko will be eligible to earn and use three (3) weeks of paid vacation per calendar year, accruing at the rate of 1.25 days per month. If Mr. Byczko is terminated by the Company either without cause, or due to a change in control, he will receive sixty (60) days of severance payments. Mr. Byczko's receipt of the severance package is subject to Mr. Byczko signing a release statement that will include non-disclosure, non-disparagement and non-compete clauses.

Grants of Plan-Based Awards

The Company awarded options to our named executive officers during the fiscal year ended December 31, 2009 as set forth below.

GRANTS OF PLAN-BASED AWARDS FOR THE YEAR ENDED DECEMBER 31, 2009

Name	Grant Date Ti	Under Ince	ntive P Awards	quity lan	P Und In Plan	ated Fu ayouts er Equ icentive in Awar	uity e eds	# of shares of Stock or	: All other Option Awards: # of securities Underlying Options		Grant Date Fair Value of Stock and Option Awards(1)
		(\$)	(\$)	(\$)	(#)	(#)	(#)	(#)	(#)	(\$/Sh)	(\$)
Michael C.											
Ferrara	1/8/2009	0	0	0	0	0	(0	75,000	0.57	34,000
	6/4/2009	0	0	0	0	0	(0	50,000	0.55	22,000
Peter F. Byczko	3/26/2009	0	0	0	0	0	(0	25,000	0.34	7,000
William J.									-,		,
Conroy	1/8/2009	0	0	0	0	0	(0	30,000	0.57	14,000
•	6/4/2009	0	0	0	0	0	(0	50,000	0.55	22,000

Represents the grant date fair value of each option award computed in accordance with ASC 718 (grant date fair value of \$0.45 per share with respect to options granted to Mr. Ferrara and Mr. Conroy on 1/8/2009, \$0.44 per share with respect to options granted to Messrs. Ferrara and Conroy on 6/4/2009 and \$0.29 per share with respect to options granted to Mr. Byczko on March 26, 2009). Each of the options granted were ten year options that vest as to 25% annually over four years from the date of grant.

Discussion of Summary Compensation and Grants of Plan-Based Awards Tables

Our executive compensation policies and practices, pursuant to which the compensation set forth in the Summary Compensation Table and the Grants of Plan-Based Awards Table was paid or awarded, are described above under "Compensation Discussion and Analysis." The Company did not establish a bonus pool or other discretionary bonus plan for 2009 or 2008. However, based on the Company's financial performance in 2009, the Compensation Committee approved, and the Board ratified an award of a discretionary bonus to certain named executive officers as set forth in the Summary Compensation Table. Additionally, the Compensation Committee granted options to purchase the Company's Common Stock under the 2006 Stock Plan to provide Mr. Ferrara and Mr. Conroy a long-term incentive which aligns their interest with those of the shareholders. The terms of the options were consistent with past grants, with 25% exercisable on each of the first four anniversaries of the date of grant.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth information with respect to outstanding equity awards, both exercisable and unexercisable, for our named executive officers as of December 31, 2009.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END AS OF DECEMBER 31, 2009

Name	Options(#)	Number of Securities Underlying Unexercised Options(#) Unexercisable(Underlying Unexercised	Exercise	Option Expiration Date	Number of Shares or Units of Stock that have not Vested (#)		Equity incentive Plan Awards: Number of Unearned Shares, Units, or Other Rights that have not vested (#)	or
Michael C. Ferrara	150,000	150,000	0	1.05	11/14/2017	0	0	0	0
C. I Citata	0	75,000		0.57	1/8/2019	0	0	0	0
	0	50,000	0	0.55	6/4/2019	0	0	0	0
	150,000	275,000							
Peter F. Byczko	0	25,000 25,000		0.34	3/26/2019	0	0	0	0
William J. Conroy	5,000	15,000	0	1.10	3/18/2018	0	0	0	0
J. Comby	12,500	37,500		1.12	6/17/2018	0	0	0	0
		30,000		0.57	1/8/2019	0	0	0	0
		50,000	0	0.55	6/4/2019	0	0	0	0
	15.500	122 500							
Brian E.	17,500	132,500							
LeClair(2)	0	0				0	0	0	0

⁽¹⁾The expiration date of each option is ten years after the date of grant. Generally, all options for our named executive officers vest over a four year period in equal annual installments, with the first 25% vesting one year after date of grant.

⁽²⁾ Mr. LeClair is our former Chief Financial Officer, who resigned on March 31, 2009. Mr. LeClair had no outstanding options as of December 31, 2009.

Options Exercises and Stock Vested

The following table sets forth information with respect to our named executive officers concerning the exercise of stock options during the fiscal year ended December 31, 2009.

OPTION EXERCISES AND STOCK VESTED FOR THE YEAR ENDED DECEMBER 31, 2009

	Option Av	wards	Stock Aw	ards	
	Number of Shares Acquired on Exercise	Value Realized on Exercise	Number of Shares Acquired on Vesting	Value Realized on Vesting	
Name	(#)	(\$)	(#)	(\$)	
Michael C. Ferrara	0	0	0	0	
Peter F. Byczko	0	0	0	0	
William J. Conroy	0	0	0	0	
Brian E. LeClair(1)	0	0	0	0	

Mr. LeClair is our former Chief Financial Officer, who resigned on March 31, 2009.

Pension Benefits

As of December 31, 2009, we had no pension benefits plans in effect.

Nonqualified Deferred Compensation

As of December 31, 2009, we had no deferred compensation plans in effect.

Director Compensation

(1)

The table below summarizes the compensation paid to our non-employee Directors for the fiscal year ended December 31, 2009. Directors who are employees receive no additional compensation for Board service.

DIRECTOR COMPENSATION FOR THE YEAR ENDED DECEMBER 31, 2009

					Change in		
					Pension		
	Fees			Non-Equity	Value		
	Earned			Incentive	and	All	
	or Paid	Stock	Optiion	Plan 1	Nonqualified	l Other	
	in Cash(2)	Awards	Awards(3)(40	Compensation	Deferred	Compensation	Total
Name or Director (1)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
James N. Little	22,000	0	3,375	0	0	0	25,375
Eric G. Walters	24,000	0	3,375	0	0	0	27,375
George Uveges	22,000	0	3,375	0	0	0	25,375
Leo Pierre Roy	22,000	0	3,375	0	0	0	25,375
Henry Kay	0	0	0	0	0	0	0
Stephen J. Robinson	0	0	0	0	0	0	0

Dr. Little retired from the Board on December 31, 2009. Mr. Kay and Mr. Robinson were appointed to the Board on March 4, 2010, and thus did not receive any compensation or equity grants in 2009; however, they did receive an automatic option grant of 25,000

shares on March 4, 2010 at an exercise price of \$0.90, the terms of which are described below.

- Each Director received a fee of \$4,500 per quarter for serving on the Board during fiscal 2009. Directors received an additional fee of \$1,000 per quarter if the Director was the Chairman of the Board, Nominating and Corporate Governance Committee or the Compensation Committee. The Chairman of the Audit Committee receives an additional \$1,500 per quarter.
- The option awards reflect the aggregate grant date fair value computed in accordance with ASC 718. The non-employee directors were granted an option of 7,500 shares on January 2, 2009. The assumptions used in the calculation of these amounts are included in Note 1 to the Company's audited consolidated financial statements for the year ended December 31, 2009 included in the Company's Annual Report on Form 10-K.
- Dr. Little had 36,000 option awards outstanding as of December 31, 2009. Mr. Walters had 53,500 option awards outstanding as of December 31, 2009. Mr. Uveges had 53,500 option awards outstanding as of December 31, 2009. Mr. Roy had 36,000 option awards outstanding as of December 31, 2009. No non-employee Director has received a stock award under the Company's equity incentive plans.

Non-employee directors are granted an option to purchase 25,000 shares upon joining the Board of Directors and 7,500 shares on the first business day after January 1 of each calendar year if the non-employee director remains a director through that date. The option grants are exercisable on the following terms, assuming continued membership on the Board of Directors: 25% exercisable six months and one day after the date of grant and the remaining 75% exercisable in three (3) equal annual installments on each of the first three anniversaries of the date of grant. All options were granted automatically pursuant to the terms of our 2006 Stock Plan and expire five (5) years from the date of grant. If Proposal 2 is approved at the 2010 Annual Meeting of Stockholders, future automatic annual option grants to the directors will be for a term of ten (10) years and the annual grant will be increased to an option to purchase 15,000 shares.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Beneficial Ownership of Directors and Executive Officers and Principal Holders of Voting Securities

Our Common Stock is the only class of securities entitled to vote at the Meeting. As of March 1, 2010, 10,394,782 shares of Common Stock were issued and outstanding and entitled to vote at the Meeting. Each share of Common Stock is entitled to one vote. The following table sets forth information regarding ownership of our Common Stock as of March 1, 2010 for (i) each of our named executive officers, directors, and director nominees (ii) beneficial holders of more than 5% of our Common Stock, and (iii) all of our named executive officers and directors as a whole. For named executive officers and directors, this table also includes the position held by each such person.

	Positions and Offices with the Company, if any(l)	Amount and Nature of Beneficial Ownership (2)	Percent of Class (3)
Michael C. Ferrara	President, Chief Executive Officer and Director	170,000(4)	1.6%
Peter F. Byczko	Vice President of Finance and Chief Accounting Officer	6,250(5)	*
William J. Conroy	Senior Vice President Operations and Engineering	30,000(6)	*
George Uveges	Chairman of the Board	68,500(7)	*
Eric G. Walters	Director	57,500(8)	*
Leo Pierre Roy	Director	71,486(9)	*
Henry Kay	Director	0	*
Stephen J. Robinson	Director	0	*
All current directors and named executive officers as a group (8 persons)		403,736(10)	3.7%
Irwin J. Gruverman 60 Seminary Drive Newton, MA 02466		1,697,805(11)	16.3%
Joseph P. Daly 497 Circle Freeway Cincinnati, OH 45246		1,107,577(12)	10.7%
Global Strategic Partners, LLC c/o Corporation Service 2711 Centerville Road, Suite 400 Wilmington, DE 19808		11,656,464(13)	(13)

* Less than 1%

(1)

All addresses are c/o Microfluidics International Corporation, 30 Ossipee Road, Newton, MA 02464, unless otherwise indicated.

- (2)
 Unless otherwise indicated, each person possesses sole voting and investment power with respect to the shares.
- The number of shares beneficially owned by each entity, person, director, nominee for director, or named executive officer is determined under applicable SEC rules, particularly Rule 13d-3, and the information is not necessarily indicative of beneficial ownership for any other purposes. Under such rules, each entity or individual is considered the beneficial owner of any shares as to which they have the sole or shared voting power or investment power. Such persons are also deemed under the same rules to beneficially own any shares that they have the right to acquire within 60 days of March 1, 2010, though the exercise of stock options or other similar rights. This stock ownership information is based upon information furnished to us by the persons named on the table. The inclusion herein of any shares of Common Stock deemed beneficially owned does not constitute an admission of beneficial ownership of those shares. Percentage ownership is based on 10,647,728 shares of Common Stock issued and outstanding on March 1, 2010.
- (4) Consists of 20,000 shares of Common Stock and 150,000 shares of Common Stock subject to currently exercisable options.
- (5) Consists of 0 shares of Common Stock and 6,250 shares of Common Stock subject to options exercisable within 60 days.
- (6)
 Consists of 0 shares of Common Stock and 30,000 shares of Common Stock subject to currently exercisable options, including 12,500 shares subject to options exercisable within 60 days.
- (7) Consists of 30,000 shares of Common Stock and 38,500 shares of Common Stock subject to currently exercisable options.
- (8) Consists of 19,000 shares of Common Stock and 38,500 shares of Common Stock subject to currently exercisable options.
- (9) Consists of 50,111 shares of Common Stock and 21,375 shares of Common Stock subject to currently exercisable options.
- (10)
 Includes 284,625 shares of Common Stock subject to currently exercisable options, including 18,750 shares subject to options exercisable within 60 days. See footnotes 4 through 9 above.
- Information with respect to beneficial ownership is based upon information furnished by Irwin J. Gruverman in Schedule 13-D/A filed with the Securities and Exchange Commission on February 15, 2008. Mr. Gruverman has sole power to vote or dispose of 1,597,805 shares of the Company's common stock. Marjorie Gruverman, Mr. Gruverman's spouse, has sole voting or dispositive power with respect to 100,000 shares of the Company's common stock, to which Mr. Gruverman disclaims any beneficial ownership.
- Information with respect to beneficial ownership is based upon information furnished by Joseph P. Daly in Schedule 13-D/A filed with the Securities and Exchange Commission on December 29, 2009. Mr. Daly has sole voting and dispositive power over 712,427 shares of the Company's common stock. Karina Daly has sole voting and dispositive power 57,000 shares of the Company's common stock. EssigPR, Inc. has shared voting and dispositive power over 338,150 shares of the Company's common stock. EssigPR, Inc. is a C corporation controlled by Mr. Daly.
- Information with respect to beneficial ownership is based upon information furnished by Global Strategic Partners, LLC ("GSP") in a Schedule 13D/A filed with the Securities and Exchange Commission on May 11, 2009. On November 14, 2008, GSP entered into a Debenture and Warrant Purchase Agreement (the "Agreement") with the Company whereby GSP purchased the Debenture and the Warrant. At the election of GSP, the Debenture is convertible in whole or part on any of the maturity date, the date that any interest payment is due (which is the first date of each

quarter), or the date on which a change of control occurs into a number of shares of the Company's common stock equal to the quotient of (i) the outstanding principal amount of the Debenture, divided by (ii) \$1.25. The Warrant may be exercised in whole or part until the earlier to occur of: (i) the seventh anniversary of the date of the Agreement, (ii) the third anniversary of the date of the Agreement in the event that the Company has retired the Debenture on or before the third anniversary or (iii) such time as GSP has acquired fifty percent (50%) of the total number of shares of the Company's Common Stock then outstanding on a fully diluted basis. The Warrant is exercisable in two (2) tranches. The first tranche is exercisable in whole or in part at \$2.00 per share. The aggregate number of shares of the Company's common stock that may be purchased in tranche one is forty percent (40%) of the Company's common stock then outstanding on a fully diluted basis, minus that number of shares of the Company's common stock that were issuable upon exercise of the conversion of the Debenture. The Warrant's second tranche is exercisable in whole or in part at \$3.00 per share. The aggregate number of shares of the Company's common stock that may be purchased in tranche two is equal to fifty percent (50%) of the Company's common stock then outstanding on a fully diluted basis, minus the sum of that number of shares of the Company's common stock that were issuable upon exercise of the conversion of the Debenture and in tranche one. Tranche two may only be exercised after the full number of shares exercisable pursuant to tranche one have been purchased. GSP and certain affiliates may be deemed to have shared voting and dispositive power with respect to these shares.

PROPOSAL 2

AMENDMENTS TO COMPANY'S 2006 STOCK PLAN

This section provides a description of the proposed amendments to the Microfluidics International Corporation 2006 Stock Plan (the "2006 Stock Plan") and the proposal that stockholders approve the amendments as described below. The full text of the 2006 Stock Plan, as amended and restated, is included as *Appendix A* to this proxy statement. The description below of the 2006 Stock Plan, as amended and restated, is qualified by reference to the full text of the plan.

The Proposed Amendment

Our stockholders initially approved our 2006 Stock Plan at our 2006 annual meeting of stockholders on June 20, 2006. As of the Record Date, approximately 272,170 shares of our common stock remained available for grant of awards under the 2006 Stock Plan. Recognizing that there are a limited number of reserved shares remaining to provide grants of equity awards under the 2006 Stock Plan and seeking to increase our flexibility in issuing awards under the plan and more closely align the participants in the plan with our stockholders, our Board of Directors adopted the proposed amendments to the 2006 Stock Plan on March 4, 2010, subject to the approval of our stockholders at the 2010 annual meeting. The amendments would:

Increase the number of shares available for issuance under the 2006 Stock Plan by 1,500,000 shares, making the total number of shares available for grant as of the Record Date equal to an aggregate of 1,772,170 (1,500,000 share increase plus 272,170 shares available for grant as of the Record Date);

Amend the definition of "cause" under the 2006 Stock Plan to take into account the definition of "cause" under an applicable employment agreement for any participant, and if no such definition of "cause" exists for a participant to use the definition in the 2006 Stock Plan, which remains unchanged;

Amend the definition of "change of control" to provide that Global Strategic Partners, LLC, a Delaware limited liability company (GSP), and its affiliates (as defined in the Exchange Act), must beneficially own sixty percent (60%) or more of our common stock on a fully diluted basis before a "change of control" is triggered under the 2006 Stock Plan and to clarify that a merger with GSP constitutes a "change of control" under the definition set forth in the 2006 Stock Plan;

Define "fair market value" equal to (i) the last reported sales price as reported on a national securities exchange on which the Company's common stock is then listed on the date of determination, (ii) the last reported sales price as reported on the over the counter market or national interdealer quotation system on the date of determination, or (iii) as otherwise determined in good faith by the Board or the Compensation Committee;

To codify our practice that nonstatutory stock options will not be issued for less than "fair market value";

To increase the automatic annual option grant to directors under Section 11 of the 2006 Stock Plan from an option to purchase 7,500 shares of common stock with a term of five (5) years to an option to purchase 15,000 shares of common stock with a term of ten (10) years;

To provide one hundred percent (100%) vesting of all unvested Awards following a "change of control" from the former provisions which required (i) that all Awards become fully vested if not assumed by the surviving corporation in the event of a change of control, (ii) one hundred percent (100%) vesting of director Awards issued under Section 11 of the 2006 Stock Plan if the directors are asked to resign or are terminated within one year of a change of control, and

(iii) fifty percent (50%) vesting of unvested Awards if a participant is terminated within one year of a change of control other than for cause; and

To specify that the 2006 Stock Plan will continue to be administered in accordance with Section 409A of the Internal Revenue Code of 1986, as amended (the "Code").

Awards Under Our Equity Compensation Plans

In addition to the 2006 Stock Plan, the Company maintains both the 1988 Stock Plan, under which it granted awards to eligible participants, including employees, officers and employee directors, and the 1989 Non-Employee Director Plan, under which it granted awards to non-employee directors (the 2006 Stock Plan together with the 1988 Stock Plan and the 1989 Non-Employee Director Plan, the "Plans"). The Company no longer grants awards under the 1988 Stock Plan or the 1989 Non-Employee Director Plan. Prior to the amendment to increase the number of shares approved for issuance under the 2006 Stock Plan by 1,500,000, the Company had authorized a total of 4,000,000 shares under the Plans, of which 1,897,471 shares have been issued pursuant to awards exercised under the Plans. As of the Record Date, there are currently outstanding options to purchase 1,830,359 shares of Common Stock under the Plans, of which options to purchase 1,497,651 shares are outstanding under the 2006 Stock Plan and options to purchase 332,708 shares are outstanding under the 1988 Stock Plan and the 1989 Non-Employee Director Plan. Together, all outstanding awards had a weighted average exercise price of \$1.10 per share and a weighted average remaining term of 8 years.

The 2006 Stock Plan, as amended, would reserve an additional 1,500,000 shares of common stock for issuance, none of which shares have been issued. The maximum number of shares that can be issued under the 2006 Stock Plan after approval of the amendments is 3,602,529 shares (the additional 1,500,000 shares available for grant and subject to this amendment, 272,170 shares available for grant under the 2006 Stock Plan, 1,497,651 shares currently covered by outstanding options under the 2006 Stock Plan, and an additional 332,709 shares currently outstanding under the 1988 Stock Plan and the 1989 Non Employee Director Plan to the extent such options are cancelled or expire without being exercised in accordance with their terms). On the Record Date, the closing price of our common stock on the OTC Bulletin Board was \$0.99 per share.

New Plan Benefits

With the exception of the automatic director grants under Section 11 of the 2006 Stock Plan, participation and the types of awards under the 2006 Stock Plan are subject to the discretion of the Compensation Committee of our Board of Directors, and as a result, the benefits or amounts that will be received by any participant or groups of participants under the 2006 Stock Plan, including from any additional shares authorized under the 2006 Stock Plan, are not currently determinable. If the amendments to the 2006 Stock Plan are approved, on the first business day of 2011, the non-employee directors will receive an automatic grant of an option to purchase 15,000 shares with a term of ten years. Before the amendments to the 2006 Stock Plan, non-employee directors received an automatic annual grant of 7,500 shares with a five-year term; however, the directors have the discretion under the 2006 Stock Plan to grant themselves additional discretionary options under the 2006 Stock Plan. In connection with the automatic annual grant in January 2010, the directors received an additional discretionary grant of an option to purchase 7,500 shares of common stock.

Additionally, as proposed in the amendments to the 2006 Stock Plan, in the event of a change of control, all Options (as defined below) and SARs (as defined below) then outstanding shall automatically become immediately exercisable in full and the restrictions and conditions on all Restricted Stock (as defined below) then outstanding, including any vesting conditions, shall be deemed waived. Before the amendments to the 2006 Stock Plan, if the Options or SARs were not assumed by the successor corporation, all such Awards would become exercisable in full and would be exercisable

for fifteen days upon receipt of notice after which they would expire. With respect to the Restricted Stock, all restrictions on vesting would be waived if the Restricted Stock were not assumed by the successor corporation in the event of a change of control.

The purpose of the 2006 Stock Plan is to attract, motivate and retain highly qualified officers, directors, employees and other key individuals. We believe that providing these individuals an opportunity to acquire a direct proprietary interest in the future success of the Company will motivate these individuals to serve the Company and to expend maximum effort to improve our business and results of operations. Our average annual grants for the past three years have been approximately 453,000. Accordingly, we believe the amendments to the 2006 Stock Plan are important to our overall compensation strategy and necessary to further our compensation philosophy and objectives as discussed in our "Compensation Discussion and Analysis" above.

The 2006 Stock Plan is important to our ongoing effort to build stockholder value. As discussed in the Compensation Discussion and Analysis section of this proxy statement, stock option awards have historically been and remain a critically important component of our compensation program. Our Compensation Committee believes that our ability to grant equity incentive awards to employees is an important factor in our ability to attract, retain and motivate key employees. Our Compensation Committee believes that equity compensation provides a strong incentive for employees to work to grow the business and build long term stockholder value.

We believe that the remaining shares available under our 2006 Stock Plan are insufficient to meet our future compensation requirements, even during the next year. This issue of share exhaustion will be compounded over a longer term. As discussed above under our Compensation Disclosure and Analysis we believe we must continue to offer a competitive equity compensation plan in order to attract and motivate our employees. If the 2006 Stock Plan were to run out of shares available for grant, we would not be able to issue additional options or other equity awards. While we could consider increasing cash compensation instead of stock option grants, this would require use of more of our cash resources. We believe it would be more prudent to conserve our cash reserves, and that stock options do a better job of aligning employee and stockholders long term interests. We also believe that accelerating the vesting of all awards upon a change of control, including options, greater aligns the interests of our employees with our stockholders and will enhance our ability to attract, retain and motivate our employees.

We therefore ask you to vote "FOR" the proposal to amend the 2006 Stock Plan to increase the number of shares of common stock authorized for issuance under the 2006 Stock Plan and make those other changes to the 2006 Stock Plan described in the proxy statement. The affirmative vote of a majority of the shares present, in person or by proxy, and entitled to vote at the meeting is required to approve these amendments.

On the Record Date, there were three executive officers, five non-employee directors and approximately 48 employees who were eligible to participate in the 2006 Stock Plan. The following table sets forth the aggregate number of shares of our common stock subject to options granted under the 2006 Stock Plan during 2009 and the average per share exercise price of such options. There were

no shares issued pursuant to awards of SARs or Restricted Stock granted under the 2006 Stock Plan during 2009, or in any prior year since the approval of the 2006 Stock Plan.

		Options Granted	Option Exercise	Option	Weighted Average Option Exercise		
Name or Group	Grant Date	(#)	Price (\$)	Awards (\$)	Price (\$)		
Executive Officers:							
Michael C. Ferrara	1/8/2009	75,000	0.57	42,750			
	6/4/2009	50,000	0.55	27,500			
		125,000		70,250	0.56		
		,		ŕ			
Peter F. Byczko	3/26/2009	25,000	0.34	8,500	0.34		
,							
William J. Conroy	1/8/2009	30,000	0.57	17,100			
·	6/4/2009	50,000	0.55	27,500			
		80,000		44,600	0.56		
Executive Officers as a		00,000		,000	0.00		
Group		230,000		123,350	0.54		
Non-employee Directors:				- ,			
r J							
James N. Little	1/2/2009	7,500	0.36	2,700	0.36		
Eric G. Walters	1/2/2009	7,500	0.36	2,700	0.36		
George Uveges	1/2/2009	7,500	0.36	2,700	0.36		
Leo Pierre Roy	1/2/2009	7,500	0.36	2,700	0.36		
Henry Kay		0		0			
Stephen J. Robinson		0		0			
Non-employee Directors							
as a Group		30,000		10,800	0.36		
Non-executive Officer							
Employees as a Group		259,000		147,500	0.57		
Description of the 2006 Stock Plan							

Description of the 2006 Stock Plan

On March 4, 2010, the Company's Compensation Committee and Board of Directors approved the amendments to the 2006 Stock Plan, subject to stockholder approval. The Company's 2006 Stock Plan, as amended and restated, is attached as Appendix A. The 2006 Stock Plan provides for grants to eligible participants, including employees, officers and employee directors, and to non-employee directors. The purposes of the 2006 Stock Plan are to attract, motivate and retain highly qualified personnel, and to promote the success of the Company's business.

The Company currently maintains both the 1988 Stock Plan, under which it granted awards to eligible participants, including employees, officers and employee directors, and the 1989 Non-Employee Director Plan, under which it granted awards to non-employee directors. The 1988 Stock Plan was originally adopted by the stockholders in 1988 and was last amended in 2002. The 1989 Non-Employee Director Plan was originally adopted by the stockholders in 1989 and was last amended in 1996. Upon the approval of the 2006 Stock Plan at the 2006 annual stockholders meeting, the Company stopped granting any new options under either the 1988 Stock Plan or the 1989 Non-Employee Director Plan. Existing options under the 1988 Stock Plan and the 1989 Non-Employee Director Plan can still be exercised until they expire in accordance with their terms.

The 2006 Stock Plan, as amended, would reserve an additional 1,500,000 shares of common stock for issuance, none of which shares have been issued. The maximum number of shares that can be issued under the 2006 Stock Plan after approval of the amendments is 3,602,529 shares (the additional 1,500,000 shares available for grant and subject to this amendment, 272,170 shares available for grant

under the 2006 Stock Plan, 1,497,651 shares currently covered by outstanding options under the 2006 Stock Plan, and an additional 332,709 shares currently outstanding under the 1988 Stock Plan and the 1989 Non Employee Director Plan to the extent such options are cancelled or expire without being exercised in accordance with their terms). Shares underlying awards that terminate or expire prior to issuance of the shares underlying the Award will be available for additional Awards. The 2006 Stock Plan will terminate ten (10) years from the date of original approval of the Board of Directors, although each Award that is outstanding immediately prior to the termination of the 2006 Stock Plan will still be eligible for exercise pursuant to the terms of such Award.

The 2006 Stock Plan provides for grants of options ("**Options**") to purchase Common Stock that are intended to qualify as incentive stock options ("**Incentive Stock Options**") under Section 422 of the Internal Revenue Code of 1986, as amended (the "**Code**") or options that are not intended to qualify as Incentive Stock Options ("**Nonstatutory Stock Options**"). In addition, the 2006 Stock Plan also provides for the grant of stock appreciation rights ("**Stock Appreciation Rights**") and restricted stock ("**Restricted Stock**" and together with the Options and the Stock Appreciation Rights, collectively the "**Awards**" and each individually, an "**Award**"). To date, the Company has only issued stock options under the 2006 Stock Plan.

Incentive Stock Options will be issued at the then fair market value of the Company's Common Stock and will have a term of no longer than ten (10) years from the date of grant, although Incentive Stock Options issued to holders of more than 10% of the Company's voting power will have an exercise price no less than 110% of the fair market value on the date of grant and will have a term of no longer than five (5) years from the date of grant. Nonstatutory Options will be issued at the then fair market value of the Company's Common Stock and will have a term as determined by the administrator of the 2006 Stock Plan, but generally shall not have a term longer than ten (10) years from the date of grant.

Stock Appreciation Rights must generally be exercised no later than ten (10) years from the date of grant unless earlier specified in the Award. The terms for Restricted Stock shall be determined by the administrator in accordance with the 2006 Stock Plan. Upon exercise of a Stock Appreciation Right, the holder of the Stock Appreciation Right shall be entitled to payment from the Company of an amount equal to the difference between the fair market value of the share of the Company's Common Stock on the exercise date and the exercise price of the Stock Appreciation Right, multiplied by the number of shares of Common Stock with respect to the Stock Appreciation Right that is exercised.

Historically, individual grants during a fiscal year have generally not exceeded 100,000 shares, although the Company may make larger grants in the future, and has done so recently with its Chief Executive Officer. In general, participants in the 2006 Stock Plan cannot be granted Options or Stock Appreciation Rights to purchase more than 250,000 shares in any fiscal year. However, in connection with a participant's commencement of service to the Company, such participant may be granted an Option to purchase up to an additional 250,000 shares of Common Stock.

The 2006 Stock Plan provides that independent directors are automatically granted a Nonstatutory Stock Option to purchase 25,000 shares upon joining the Board of Directors and, upon the approval of the amendments by the stockholders, 15,000 shares on the first business day after January 1 of each calendar year if the independent director remains a director through that date. Any automatic grants of Nonstatutory Stock Options made after the approval of the amendments to independent directors pursuant to the 2006 Stock Plan will be exercisable for a period of ten (10) years from the date of grant, on the following terms: 25% exercisable six months and one day after the date of grant and the remaining 75% exercisable in three (3) equal annual installments on each of the first three (3) anniversaries of the date of grant. Certain termination events may result in the acceleration of some or all of the unvested Nonstatutory Options and may result in an extension of the time in which to exercise certain Nonstatutory Stock Options.

In general, upon the approval of the amendments by the stockholders, upon a change of control of the Company, outstanding Stock Appreciation Rights, and Options will be fully accelerated or become fully vested.

The Company may amend, alter, suspend or terminate the 2006 Stock Plan at any time and shall obtain stockholder approval of any amendment to the extent necessary or desirable to comply with any applicable law or regulation. The Company may not amend the 2006 Stock Plan to permit the repricing, including by way of exchange or acquisition for cash or other consideration, of any Award without receiving prior stockholder approval.

Federal Income Tax Consequences

The following is a summary of the principal federal income tax consequences of certain Option transactions under the 2006 Stock Plan. These tax consequences are subject to change and such changes may apply retroactively. Other tax consequences of the 2006 Stock Plan, including local, state and foreign and federal estate and gift tax consequences, are not discussed.

An optionee is generally not subject to federal income tax upon the grant of an Incentive Stock Option. If an optionee sells or transfers shares after two years from the date of grant and after one year from the date of exercise of an Incentive Stock Option (the "holding periods"), then (1) upon sale of such shares, any amount realized in excess of the option price (the amount paid for the shares) will be taxed to the optionee as a long-term capital gain, and any loss sustained will be a long-term capital loss, and (2) there will be no deduction for the Company for federal income tax purposes. Exercise of an Incentive Stock Option may result in alternative minimum tax liability for an optionee.

If an optionee disposes of shares acquired upon the exercise of an Incentive Stock Option prior to the expiration of the holding periods described above, generally (a) the optionee will realize ordinary income in the year of disposition in an amount equal to the excess (if any) of the fair market value of the shares at exercise (or, if less, the amount realized on a sale of such shares) over the option price thereof, and (b) the Company will be entitled to deduct such amount. Special rules apply when shares are tendered to satisfy some or all the exercise price of the Incentive Stock Option.

If an Incentive Stock Option is exercised or the shares are disposed of such that it no longer qualifies for the tax treatment described above, the option is treated as a Nonstatutory Option. In addition, an Incentive Stock Option will not be eligible for the tax treatment described above if it is exercised more than three months following termination of employment, although special rules apply if the reason for termination is death or disability.

An optionee is generally not subject to federal income tax upon the grant of a Nonstatutory Option. Generally (i) at exercise, ordinary income is realized by the optionee in an amount equal to the difference between the option price and the fair market value of the shares on the date of exercise, and the Company receives a tax deduction for the same amount, and (ii) at disposition of such shares, appreciation or depreciation after the date of exercise is treated as either short-term or long-term capital gain or loss depending on how long the shares have been held. Special rules apply when shares are tendered to satisfy some or all the exercise price of the Nonstatutory Option. Upon exercise, the optionee will also be subject to Social Security taxes on the excess of the fair market value over the exercise price of the Nonstatutory Option.

A change in control that accelerates the vesting of an Option may cause a portion of the payments with respect to the Option to be treated as a "parachute payment" as defined in the Code. All or a portion of a parachute payment may not be deductible to the Company and the recipient may be subject to a twenty percent (20%) federal excise tax on all or a portion of such payment, in addition to other taxes.

Section 162(m) of the Code may limit the Company's deduction for certain awards under the 2006 Stock Plan if the compensation received by the Chief Executive Officer or other executive officer is in excess of \$1 million a year (other than qualified performance-based compensation that otherwise meets the requirements of Section 162(m) of the Code). The 2006 Stock Plan is structured to allow grants to qualify as qualified performance-based compensation.

Equity Compensation Plan Information

The equity compensation plan information is as of December 31, 2009, and does not reflect the additional 1,500,000 shares requested for reserve under this Proposal 2. See also Note 11 to the Company's audited consolidated financial statements for the year ended December 31, 2009 included in the Company's Annual Report on Form 10-K filed with the SEC on March 29, 2010. The equity compensation plan includes our 2006 Stock Plan, our 1988 Stock Plan, 1989 Non-Employee Director Plan and our employees stock purchase plan.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted- average exercise pri- of outstandii options, warrants ar rights (b)	remaining available for ce future issuance under ng equity compensation plans (excluding
Equity compensation plans approved by		`,	
stockholders	1,434,609	\$ 1	.10 675,420
Total	1,434,609	\$ 1	.10 675,420

Recommendation

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE FOR THE AMENDMENTS TO THE 2006 STOCK PLAN, AND PROXIES SOLICITED BY THE BOARD OF DIRECTORS WILL BE VOTED IN FAVOR OF SUCH APPROVAL UNLESS A STOCKHOLDER HAS OTHERWISE INDICATED ON THE PROXY CARD.

PROPOSAL 3

RATIFICATION OF THE BOARD OF DIRECTORS' APPOINTMENT OF AUDITORS

The Audit Committee has approved the appointment of the firm of Marcum LLP ("Marcum"), to serve as our independent registered public accountants for the fiscal year ending December 31, 2010. We are asking the stockholders to ratify the appointment of Marcum as our independent registered public accountants for fiscal 2010.

On April 19, 2010, UHY LLP ("UHY"), the Company's independent registered public accounting firm, notified the Company that, effective April 16, 2010, its New England practice was acquired by Marcum. UHY further notified us that, as a result of this transaction, UHY will no longer have staff in New England and, UHY resigned as out independent registered public accounting firm effective as of April 19, 2010. Our Audit Committee approved the engagement of Marcum effective April 19, 2010. During our most two recent fiscal years ended December 31, 2009 and 2008 and through April 19, 2010, the Company did not consult with Marcum on (i) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that may be rendered on the Company's financial statements, and Marcum did not provide either a written report or oral advice to the Company that was an important factor considered by the Company in reaching a decision as to any accounting, auditing, or financial reporting issue; or (ii) the subject of any disagreement, as defined in Item 304(a)(1)(iv) of Regulation S-K and the related instructions, or a reportable event within the meaning set forth in Item 304(a)(1)(v) of Regulation S-K.

UHY audited our financial statements for the fiscal years ended December 31, 2009 and 2008. The audit report of UHY on the financial statements of the Company as of and for the years ended December 31, 2009 and 2008 did not contain an adverse opinion or a disclaimer of opinion, and was not qualified or modified as to uncertainty, audit scope or accounting principles. In connection with the audits of the Company's financial statements for the fiscal years ended December 31, 2009 and 2008 and through April 19, 2010, there were: (i) no disagreements between the Company and UHY on any matters of accounting principles or practices, financial statement disclosure, or auditing scope or procedures, which disagreements, if not resolved to the satisfaction of UHY, would have caused UHY to make reference to the subject matter of the disagreement in their reports on the Company's financial statements for such years, and (ii) no reportable events within the meaning set forth in Item 304(a)(1)(v) of Regulation S-K. During fiscal 2009 and 2008, UHY had a continuing relationship with UHY Advisors, Inc. ("Advisors") through which UHY's partners provide non-audit services. UHY has only a few full-time employees. Therefore, few, if any, of the audit services performed were provided by permanent full-time employees of UHY. UHY manages and supervises the audit services and audit staff, and is exclusively responsible for the opinion rendered in connection with its examination.

In the event that ratification of the Audit Committee's appointment of Marcum is not obtained at the Meeting, the Audit Committee will reconsider their appointment. In the event that the selection of Marcum is ratified at the Meeting, the Audit Committee, in its discretion, may select a new independent registered public accounting firm at any time during the year if it determines that such a change would be in our best interests and those of our stockholders.

The Board of Directors recommends that the stockholders ratify this appointment, although such ratification is not required under Delaware law, or the Company's Certificate of Incorporation or By-Laws. The affirmative vote of a majority of the shares present, in person or represented by proxy, at the meeting and entitled to vote is required to ratify such appointment. It is expected that a member of the firm of Marcum and UHY, will be present at the meeting. The representative of Marcum and UHY will be given the opportunity to make a statement if he or she desires to do so and will be available to respond to appropriate questions.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE FOR THE RATIFICATION OF THE APPOINTMENT OF MARCUM LLP AS THE COMPANY'S INDEPENDENT AUDITORS, AND PROXIES SOLICITED BY THE BOARD OF DIRECTORS WILL BE VOTED IN FAVOR OF SUCH RATIFICATION UNLESS A STOCKHOLDER HAS OTHERWISE INDICATED ON THE PROXY CARD.

INDEPENDENT ACCOUNTANT FEES FOR FISCAL YEARS 2009 AND 2008

Audit Fees

During the fiscal years ended December 31, 2009 and December 31, 2008, UHY LLP ("UHY"), was paid approximately \$158,000 and \$110,000, respectively, for the audit of the Company's financial statements and review of financial statements included in the Company's reports on Form 10-Q or services that are normally provided by UHY in connection with statutory and regulatory filings or engagements for those fiscal years. No audit fees were paid to Marcum LLP ("Marcum") during the fiscal years ended December 31, 2009 and December 31, 2008, respectively.

Audit-Related Fees

During the fiscal years ended December 31, 2009 and December 31, 2008, UHY was paid approximately \$16,000 and \$24,000, respectively, for assurance and related services that are reasonably related to the performance of audit or review of our financial statements and are not reported under "Audit Fees" above. No audit-related fees were paid to Marcum during the fiscal years ended December 31, 2009 and December 31, 2008, respectively.

Tax Fees

During the fiscal years ended December 31, 2009 and December 31, 2008, UHY was paid approximately \$21,000 and \$26,000, respectively, for tax compliance, tax advice and tax planning services. No tax fees were paid to Marcum during the fiscal years ended December 31, 2009 and December 31, 2008, respectively.

All Other Fees

During the fiscal years ended December 31, 2009 and 2008, UHY received no payments other than the payments discussed above. Marcum received no payments during fiscal 2009 and 2008.

For each fiscal year, the Audit Committee reviews the proposed audit and audit-related services as well as proposed permissible non-audit services to be provided by the Company's independent public accountants and approves those services it believes to be necessary and advisable. During the year, situations may arise in which the Company desires to engage the independent public accountants to perform services that were not foreseeable at the time of the initial approval. The Audit Committee pre-approves any such additional services as required by the Securities and Exchange Commission. The Audit Committee may delegate authority to one or more of its members to pre-approve any audit or non-audit service, provided that any pre-approval decisions are reported to the Audit Committee at its next regularly scheduled meeting.

The Audit Committee has considered whether the provision of non-core audit services to the Company by the Company's principal auditor is compatible with maintaining independence and has affirmed in each instance that the provision of such services was compatible with the principal auditor's independent role. During 2009, UHY provided no services other than in accordance with the pre-approved policies and procedures described above. Marcum did not provide any services for 2009.

AUDIT COMMITTEE REPORT

The information in this Audit Committee Report is not deemed "soliciting material" or to be "filed" with the Securities and Exchange Commission unless the Company specifically requests that it be treated as soliciting material or specifically incorporates it by reference into a document filed with the Securities and Exchange Commission.

The Audit Committee oversees the accounting, financial reporting and tax functions of the Company, including matters relating to the internal control over financial reporting and the appointment and activities of the Company's independent accountants. The Audit Committee has final authority to select, retain and compensate the Company's independent auditors.

The Audit Committee operates under a written charter adopted by the Company's Board of Directors. The Audit Committee and the Board review annually the written charter. A copy of the Audit Committee's charter is available on the Company's website at http://www.microfluidicscorp.com.

The Audit Committee pre-approves all services provided by the Company's independent auditors. The Audit Committee hereby affirms:

- The Audit Committee has reviewed and discussed the audited financial statements as of and for the year ended December 31, 2009 with management.
- The Audit Committee has discussed with the Company's independent auditors, UHY, the matters required to be discussed by SAS 61, as amended (Codification of Statements on Auditing Standards, AU Sec. 380), as adopted by the Public Company Accounting Oversight Board in Rule 3200T; and
- 3.

 The Audit Committee has received the written disclosures and the letter from the independent auditors required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent auditor's communication with the Audit Committee concerning independence and has discussed with the independent auditors the independent auditors' independence.

Based on the review and discussions referred to in paragraphs 1-3, the Audit Committee recommended to the Board of Directors that the audited financial statements be included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2009, which the Company filed with the Securities and Exchange Commission on March 29, 2010.

Audit Committee:

Eric G. Walters (Chairperson) George Uveges Leo Pierre Roy 36

VOTING PROCEDURES

The presence, in person or by proxy, of at least a majority of the outstanding shares of Common Stock entitled to vote at the Meeting is necessary to establish a quorum for the transaction of business. Shares represented by proxies pursuant to which votes contain one or more abstentions or broker "non-votes," are counted as present for purposes of determining the presence or absence of a quorum for the Meeting. A "non-vote" occurs when a broker or other nominee holding shares for a beneficial owner votes on one proposal, but does not vote on another proposal because the broker does not have discretionary voting power and has not received instructions from the beneficial owner.

For all matters being submitted to stockholders at the Meeting, the affirmative vote of a majority of shares present, in person or represented by proxy, and entitled to vote on that matter, is required for approval. Under the Delaware General Corporation Law (the "DGCL") and our By-Laws, all broker non-votes would be considered present for purposes of determining a quorum, but would not be considered to represent shares "present and entitled to vote" on that proposal. Broker non-votes with respect to Proposals 1 and 2 will therefore not be counted as "present and entitled to vote" in determining the outcome of the votes on these proposals and will not affect the outcome of the vote, assuming a quorum is present. We believe that brokers have the authority to vote their customers' shares with respect to the ratification of the appointment of the Company's independent registered public accounting firm, which is Proposal 3, even if their customers do not instruct their nominees how to vote on this matter. A stockholder may abstain on any proposal being presented at the 2010 Meeting. With respect to Proposals 1, 2 and 3, abstentions will be considered present for purposes of determining whether a quorum exists, and will be counted as shares "present and entitled to vote" and will have the same effect as votes "against" such proposals.

ANNUAL REPORT ON FORM 10-K

We filed our Annual Report on Form 10-K for the year ended December 31, 2009 with the SEC on March 29, 2010. We will mail without charge, upon written request, a copy of our Annual Report on Form 10-K for 2009, excluding exhibits. Please send a written request to Peter Byczko, Vice President and Chief Accounting Officer, 30 Ossipee Road, Newton Massachusetts, 02462. Our Annual Report on Form 10-K for 2009 may also be accessed and printed directly from our investor relations web page.

OTHER BUSINESS

The Board of Directors knows of no business that will be presented for consideration at the Meeting other than that stated above. If any other business should come before the Meeting, votes may be cast pursuant to proxies in respect to any such business in the best judgment of the person or persons acting under the proxies.

STOCKHOLDER PROPOSALS

Under Rule 14a-8 promulgated under the Securities and Exchange Act of 1934, stockholders of the Company may present proper proposals for inclusion in the Company's proxy statement and for consideration at the next annual meeting of stockholders by submitting their proposals to the Company in a timely manner. In order to be considered for inclusion in the proxy statement distributed to stockholders prior to the annual meeting in the year 2011, a stockholder proposal must be received by the Company no later than January 11, 2011 and must otherwise comply with the requirements of Rule 14a-8.

Except in the case of proposals made in accordance with SEC Rule 14a-8, the Company's proxy holders are allowed to use their discretionary voting authority on stockholder proposals received by the Company 45 days or less prior to the anniversary of the date on which the Company first mailed its proxy materials for its immediately preceding annual meeting of stockholders, which date for the 2011

Annual Meeting is March 23, 2011. Stockholder proposals should be delivered in writing to Peter Byczko, Vice President of Finance and Chief Accounting Officer, Microfluidics International Corporation, P.O. Box 9101, 30 Ossipee Road, Newton, Massachusetts 02464.

EXPENSES AND SOLICITATION

The cost of solicitation of proxies will be borne by the Company. Proxies will be solicited principally through the mail. Directors, officers and regular employees of the Company may make further solicitation of proxies from some stockholders personally, by telephone, internet or special letter. No additional compensation, except for reimbursement of reasonable out-of-pocket expenses, will be paid for any such further solicitation. In addition, the Company may request banks, brokers, and other custodians, nominees and fiduciaries to solicit customers of theirs who have shares of the Company registered in the name of the nominee. The Company will reimburse any such persons for their reasonable out-of-pocket expenses. The Company may engage a proxy solicitor to which it would pay customary fees and expenses.

Appendix A

AMENDED AND RESTATED MICROFLUIDICS INTERNATIONAL CORPORATION 2006 STOCK PLAN

- 1. <u>Nature and Purposes of the Plan.</u> The Plan permits the grant of Incentive Stock Options, Nonstatutory Stock Options, Restricted Stock and Stock Appreciation Rights. In addition, the Plan provides for automatic option grants to Independent Directors. The purposes of this 2006 Stock Plan are: (a) to attract and retain the best available personnel for positions of substantial responsibility, (b) to provide additional incentive to Employees and Consultants, and (c) to promote the success of the Company's business.
 - 2. <u>Definitions.</u> As used herein, the following definitions shall apply:
 - (a) "Administrator" means the Board or the Committee of the Board designated by the Board to administer the Plan in accordance with **Section 4** of the Plan.
 - (b) "Applicable Laws" means the requirements relating to the administration of equity incentive plans under applicable U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws of any foreign country or jurisdiction where Awards are granted under the Plan.
 - (c) "Award" means, individually or collectively, a grant under the Plan of Options, SARs or Restricted Stock.
 - (d) "Award Agreement" means the written agreement setting forth the terms and provisions applicable to an Award granted under the Plan. The Award Agreement is subject to the terms and conditions of the Plan.
 - (e) "Business Day" means a day on which the New York Stock Exchange, or such other recognized securities exchange or over the counter market on which the Company's Common Stock is then publically traded is open for trading.
 - (f) "Cause" means such definition as set forth in an applicable agreement with the Service Provider and the Company or a Subsidiary, including any employment agreement, or, in the absence of such definition, means the following: (i) an act of personal dishonesty taken by the Participant in connection with his or her responsibilities as an employee and intended to result in substantial personal enrichment of the Participant, (ii) Participant being convicted of or pleading *nolo contendere* to a felony, (iii) a willful act by the Participant that constitutes gross misconduct and which is injurious to the Company, (iv) following delivery to the Participant of a written demand for performance from the Company which describes the basis for the Company's reasonable belief that the Participant has not substantially performed his or her duties, continued violations by the Participant of the Participant's obligations to the Company that are demonstrably willful and deliberate on the Participant's part.
 - (g) "Change in Control" means the occurrence of any of the following events:
 - (i) Any Person becomes the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; provided however, that with respect to Global Strategic Partners, LLC, a Delaware limited liability company, and its affiliates (as defined in the Exchange Act), such number shall be sixty (60) percent on a fully diluted basis; or
 - (ii) The consummation of the sale or disposition by the Company of all or substantially all the Company's assets; or

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- (iii) The consummation of a merger or consolidation of the Company with (i) Global Strategic Partners, LLC or its affiliates (as defined in the Exchange Act) or (ii) any other corporation or entity other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity outstanding immediately after such merger or consolidation.
- (g) "Code" means the U.S. Internal Revenue Code of 1986, as amended.
- (h) "Committee" means a committee, which may consist of one or more persons whom may or may not be Board members, as is consistent with Applicable Laws, appointed by the Board in accordance with **Section 4** of the Plan.
 - (i) "Common Stock" means the common stock of the Company.
 - (j) "Company" means Microfluidics International Corporation.
- (k) "Consultant" means any person, including an advisor, engaged by the Company or a Subsidiary to render services to such entity.
 - (l) "Director" means a member of the Company's Board of Directors.
- (m) "Disability" means total and permanent disability as defined in Section 22(e)(3) of the Code, provided that in the case of Awards other than Incentive Stock Options, the Administrator in it discretion may determine whether a permanent and total disability exists in accordance with uniform and non-discriminatory standards adopted by the Administrator from time to time.
- (n) "Discretionary Options" means Incentive Stock Options and Nonstatutory Stock Options that are not issued pursuant to the Independent Director option grant provisions of **Section 11**.
- (o) "Employee" means any person, including Officers and Directors, employed by the Company or any Subsidiary of the Company. A Service Provider shall not cease to be an Employee in the case of: (i) any leave of absence approved by the Company or any leave for which a return to employment is guaranteed under Applicable Laws, or (ii) transfers between locations of the Company or between the Company, any Subsidiary or any successor. For purposes of Incentive Stock Options, no such leave may exceed ninety days, unless reemployment upon expiration of such leave is guaranteed by statute or contract. If reemployment upon expiration of a leave of absence approved by the Company is not so guaranteed, on the 181st day of such leave any Incentive Stock Option held by the Optionee shall cease to be treated as an Incentive Stock Option and shall be treated for tax purposes as a Nonstatutory Stock Option. Neither service as a Director nor payment of a director's fee by the Company shall be sufficient to constitute "employment" by the Company.
 - (p) "Exchange Act" means the Securities Exchange Act of 1934, as amended.
 - (q) "Fair Market Value" means, as of any date, the value of Common Stock determined as follows:
 - (i) If the Common Stock is listed on any established stock exchange, including without limitation the NYSE, NYSE Amex, or the Nasdaq Global Market, its Fair Market Value shall be the last sale price for such stock as reported on such exchange on the date of determination, or if no such prices are reported for such day, then on the next preceding day on which there were reported sales prices;

- (ii) If the Common Stock is not listed on a stock exchange, the Fair Market Value of a Share of Common Stock shall be the last sale price for the Common Stock on the date of determination, or if no such prices are reported for such day, then on the next preceding day on which there were reported sales prices; or
 - (iii) the Fair Market Value shall be determined in good faith by the Administrator in accordance with Applicable Law.
- (r) "Incentive Stock Option" means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code and the regulations promulgated thereunder.
 - (s) "Independent Director" means a Director who is not an Employee.
 - (t) "Inside Director" means a Director who is an Employee.
 - (u) "Nonstatutory Stock Option" means an Option not intended to qualify as an Incentive Stock Option.
- (v) "Notice of Grant" means a written or electronic notice evidencing certain terms and conditions of an individual Award. The Notice of Grant is part of the Award Agreement.
- (w) "Officer" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.
 - (x) "Option" means a stock option granted pursuant to the Plan.
 - (y) "Optioned Stock" means the Common Stock subject to an Option or SAR.
 - (z) "Parent" means a "parent corporation," whether now or hereafter existing, as defined in Section 424(e) of the Code.
 - (aa) "Participant" means the holder of an outstanding Award granted under the Plan.
 - (bb) "Plan" means this 2006 Stock Plan, as from time to time amended and in effect.
- (cc) "Qualifying Board Retirement" means an Independent Director's termination from Board membership, including pursuant to the Independent Director's death or Disability, if such termination follows ten full years of Board service or five full years of Board service and attainment of age 62 or greater.
- (dd) "Restricted Stock" means shares of Common Stock or units/rights to acquire shares of Common Stock granted pursuant to **Section 9** of the Plan that are subject to vesting.
- (ee) "Rule 16b-3" means Rule 16b-3 of the Exchange Act or any successor to Rule 16b-3, as in effect when discretion is being exercised with respect to the Plan.
 - (ff) "Section 16(b)" means Section 16(b) of the Exchange Act.
 - (gg) "Service Provider" means an Employee, Director or Consultant.
 - (hh) "Share" means a share of the Common Stock, as adjusted in accordance with Section 14 of the Plan.
- (ii) "Stock Appreciation Right" or "SAR" means an Award, granted alone or in connection with a related Option, that pursuant to **Section 10** is designated as an SAR.
- (jj) "Subsidiary" means a "subsidiary corporation", whether now or hereafter existing, as defined in Section 424(f) of the Code and also include partnerships, limited liability companies and other entities that are at least 30% owned by the Company.

Stock Subject to the Plan. Subject to the provisions of Section 14 of the Plan, the maximum aggregate number of Shares which may be issued under the Plan is 2,241,398 Shares plus the number of shares (which shall not exceed 1,695,900) underlying outstanding but unexercised awards issued under the 1988 Stock Plan or the 1989 Non-Employee Director Plan as of the date of Original Stockholder Approval of the Plan that expire or terminate in accordance with their terms under the 1988 Stock Plan and the 1989 Non-Employee Director Plan. The Shares may be authorized, but unissued, or reacquired Common Stock. If an Award expires or becomes unexercisable without having been exercised in full, or with respect to Restricted Stock, is forfeited back to or repurchased by the Company, the unpurchased Shares (or for Restricted Stock, the forfeited or repurchased shares) which were subject thereto shall become available for future grant or sale under the Plan (unless the Plan has terminated). With respect to SARs, all shares which are the subject of an issued SAR shall cease to be available under the Plan, except for SARs which expire or become unexercisable without having been exercised in full. Shares that have actually been issued under the Plan under any Award shall not be returned to the Plan and shall not become available for future distribution under the Plan, except that if Shares of Restricted Stock are repurchased by the Company at their original purchase price or are forfeited to the Company, such Shares shall become available for future grant under the Plan. For the avoidance of doubt, except for Awards which expire or become unexercisable without having been exercised in full, the following Shares shall not become available for issuance under the Plan: (i) Shares tendered by Participants as full or partial payment to the Company upon exercise of Options granted under the Plan; (ii) Shares reserved for issuance upon the grant of SARs, to the extent the number of reserved Shares exceeds the number of Shares actually issued upon exercise of the SARs; and (iii) Shares withheld by, or otherwise remitted to, the Company to satisfy a Participant's tax withholding obligations upon the lapse of restrictions on Restricted Stock or the exercise of options or SARs granted under the Plan or upon any other payment or issuance of Shares under the Plan.

4. Administration of the Plan.

(a) Procedure.

- (i) <u>Multiple Administrative Bodies.</u> The Plan may be administered by different Committees with respect to different groups of Service Providers as the Board may determine to be necessary or appropriate under Applicable Laws.
- (ii) <u>Section 162(m)</u>. To the extent that the Administrator determines it to be desirable to qualify Awards granted hereunder as "performance-based compensation" within the meaning of Section 162(m) of the Code, the Plan shall be administered by a Compensation Committee of two or more "outside directors" within the meaning of Section 162(m) of the Code.
- (iii) <u>Rule 16b-3.</u> To the extent desirable to qualify transactions hereunder as exempt under Rule 16b-3, the transactions contemplated hereunder shall be structured to satisfy the requirements for exemption under Rule 16b-3.
- (iv) Other Administration. Other than as provided above, the Plan shall be administered by (A) the Compensation Committee, or (B) a different Committee, in either case which shall be constituted to satisfy Applicable Laws. Grants to Independent Directors under **Section 11** of the Plan shall be administered by the Company's Inside Directors.
- (b) <u>Powers of the Administrator.</u> Subject to the provisions of the Plan the Administrator shall have the authority, in its discretion:
 - (i) to determine the Fair Market Value;
 - (ii) to select the Service Providers to whom Awards may be granted hereunder;

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- (iii) to determine the number of shares of Common Stock to be covered by each Award granted hereunder;
- (iv) to approve forms of agreement for use under the Plan;
- (v) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise or purchase price, the time or times when Awards may be vested, exercised, purchased or granted (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions or repurchase rights, and any restriction or limitation regarding any Award or the shares of Common Stock relating thereto, based in each case on such factors as the Administrator, in its sole discretion, shall determine;
- (vi) to construe and interpret the terms of the Plan and Awards granted pursuant to the Plan, including, but not limited to, a determination of a Participant's date of termination with respect to any Award granted under the Plan;
- (vii) to prescribe, amend and rescind rules and regulations relating to the Plan, including rules and regulations relating to sub-plans established for the purpose of qualifying for preferred tax treatment under foreign tax laws, satisfying foreign securities law or achieving other foreign legal compliance objectives;
- (viii) to modify or amend each Award (subject to **Section 16** of the Plan), including the discretionary authority to extend the post-termination vesting or exercisability of Awards longer than is otherwise provided for in the Plan;
- (ix) to allow Participants to satisfy withholding tax obligations by electing to have the Company withhold from the Shares to be issued upon exercise of an Option or SAR or upon the vesting or earlier tax recognition of Restricted Stock that number of Shares having a Fair Market Value equal to the amount required to be withheld. The Fair Market Value of the Shares to be withheld shall be determined on the date that the amount of tax to be withheld is to be determined. All elections by a Participant to have Shares withheld for this purpose shall be made in such form and under such conditions as the Administrator may deem necessary or advisable;
- (x) to authorize any person to execute on behalf of the Company any instrument required to effect the grant of an Award previously granted by the Administrator; and
 - (xi) to make all other determinations deemed necessary or advisable for administering the Plan.
- (c) <u>Effect of Administrator's Decision</u>. The Administrator's decisions, determinations and interpretations shall be final and binding on all Participants and any other holders of Awards.

5. Eligibility.

- (a) <u>Awards and Discretionary Stock Options.</u> Awards and Discretionary Options may be granted to Service Providers. Incentive Stock Options may be granted only to Employees.
- (b) <u>Automatic Independent Director Option Grants.</u> Automatic Option grants under **Section 11** hereof shall only be made to Independent Directors.

6. Limitations.

(a) Each Option shall be designated in the Award Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option. However, notwithstanding such designation, to the extent that the aggregate Fair Market Value of the Shares with respect to which Incentive Stock Options are exercisable for the first time by the Optionee during any calendar year (under all plans of the

Company or Subsidiary as defined in Code Section 424(f)) exceeds \$100,000, such Options shall be treated as Nonstatutory Stock Options. For purposes of this **Section 6(a)**, Incentive Stock Options shall be taken into account in the order in which they were granted. The Fair Market Value of the Shares shall be determined as of the time the Option with respect to such Shares is granted.

- (b) Neither the Plan nor any Award shall confer upon a Participant any right with respect to continuing their relationship as a Service Provider, nor shall they interfere in any way with the right of the Participant or the right of the Company or Subsidiaries to terminate such relationship at any time, with or without cause.
- (c) The following limitations shall apply to grants of Options and SAR. with an exercise price equal to or exceeding 100% of Fair Market Value on the grant date:
 - (i) No Service Provider shall be granted, in any fiscal year of the Company, Options or SARs to purchase more than 250,000 Shares.
 - (ii) In connection with his or her initial service, a Service Provider may be granted Options to purchase up to an additional 250,000 Shares, which shall not count against the limit set forth in subsection (i) above.
 - (iii) The foregoing limitations shall be adjusted proportionately in connection with any change in the Company's capitalization as described in **Section 14(a)**.
 - (iv) If an Option is cancelled in the same fiscal year of the Company in which it was granted (other than in connection with a transaction described in **Section 14(c)**), the cancelled Option will be counted against the limits set forth in subsections (i) and (ii) above.
- 7. Term of Plan. The Plan first became effective on June 20, 2006, the date of original stockholder approval (the "Original Stockholder Approval"). This amendment and restatement of the Plan shall be effective the date it is approved by the stockholders of the Company. Unless earlier terminated by the Board, or extended by approval of the stockholders, the term of the Plan shall expire on April 19, 2016 ("Expiration Date"), which is the tenth anniversary of the date upon which the Board first approved the Plan. No Awards shall be granted under the Plan after the Expiration Date

8. Stock Options.

(a) <u>Term of Option</u>. The term of each Option shall be stated in the Award Agreement and shall be no more than ten (10) years from the date of grant. Moreover, in the case of an Incentive Stock Option granted to an Optionee who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any subsidiary that qualifies under Code Section 424(f), the term of the Incentive Stock Option shall be five (5) years from the date of grant or such shorter term as may be provided in the Award Agreement.

(b) Option Exercise Price, Waiting Period and Consideration.

- (i) <u>Exercise Price</u>. The per share exercise price for the Shares to be issued pursuant to exercise of an Option shall be determined by the Administrator, subject to the following:
 - (1) In the case of an Incentive Stock Option
 - a) granted to an Employee who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Code Section 424(f) subsidiary, the per Share exercise price shall be no less than 110% of the Fair Market Value per Share on the date of grant.

- b) granted to any Employee other than an Employee described in paragraph a) immediately above, the per Share exercise price shall be no less than 100% of the Fair Market Value per Share on the date of grant.
- (2) In the case of a Nonstatutory Stock Option, the per Share exercise price shall be no less than 100% of the Fair Market Value per Share on the date of grant.
- (ii) <u>Waiting Period and Exercise Dates.</u> At the time an Option is granted, the Administrator shall fix the period within which the Option may become vested or be exercised and shall determine any conditions which must be satisfied before the Option may vest or be exercised.
- (iii) <u>Form of Consideration.</u> The Administrator shall determine the acceptable form of consideration for exercising an Option, including the method of payment. In the case of an Incentive Stock Option, the Administrator shall determine the acceptable form of consideration at the time of grant. Such consideration, subject to Applicable Laws, may consist entirely of:
 - (1) cash;
 - (2) check;
 - (3) other Shares which (A) in the case of Shares acquired upon exercise of an option, have been owned by the Optionee for more than six months on the date of surrender, and (B) have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Option shall be exercised;
 - (4) consideration received by the Company under a broker-assisted cashless exercise program acceptable to the Company, in its sole discretion;
 - (5) any combination of the foregoing methods of payment; or
 - (6) such other consideration and method of payment for the issuance of Shares to the extent permitted by Applicable Laws.
- (iv) Exercise of Option; Rights as a Stockholder. Any Option granted hereunder shall be exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Administrator and set forth in the Award Agreement.

An Option shall be deemed exercised when the Company receives: (i) written or electronic notice of exercise (in accordance with the Option Agreement) from the person entitled to exercise the Option, and (ii) full payment for the Shares with respect to which the Option is exercised. Full payment may consist of any consideration and method of payment authorized by the Administrator and permitted by the Option Agreement and the Plan. Shares issued upon exercise of an Option shall be issued in the name of the Optionee or, if requested by the Optionee, in the name of the Optionee and his or her spouse. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Optioned Stock, notwithstanding the exercise of the Option. Subject to Section 17, the Company shall issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 14 of the Plan.

Exercising an Option in any manner shall decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised. An Option may not be exercised for a fraction of a Share.

(c) <u>Termination of Relationship as a Service Provider.</u> If an Optionee ceases to be a Service Provider, other than upon the Optionee's death or Disability, the Optionee may exercise his or her Option within such period of time as is specified in the Award Agreement to the extent that the Option is vested and exercisable on the date of termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). In the absence of a specified time in the Award Agreement, the Option shall remain exercisable for three (3) months following the Optionee's termination. If, on the date of termination, the Optionee is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option shall revert to the Plan. If, after termination, the Optionee does not exercise his or her Option within the time specified by the Administrator, the Option shall terminate, and the Shares covered by such Option shall revert to the Plan.

Notwithstanding the above, in the event of an Optionee's change in status from Consultant, Employee or Director to Employee, Consultant or Director (e.g., an Inside Director becoming an Independent Director), an Optionee's status as a Service Provider shall continue notwithstanding the change in status. However, in such event, an Incentive Stock Option held by the Optionee shall cease to be treated as an Incentive Stock Option and shall be treated for tax purposes as a Nonstatutory Stock Option three months and one day following such change of status.

- (d) <u>Disability of Optionee</u>. If an Optionee ceases to be a Service Provider as a result of the Optionee's Disability, the Optionee may exercise his or her Option within such period of time as is specified in the Award Agreement to the extent the Option is vested and exercisable on the date of termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). In the absence of a specified time in the Award Agreement, the Option shall remain exercisable for twelve (12) months following the Optionee's termination. If, on the date of termination, the Optionee is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option shall revert to the Plan. If, after termination, the Optionee does not exercise his or her Option within the time specified herein, the Option shall terminate, and the Shares covered by such Option shall revert to the Plan.
- (e) <u>Death of Optionee</u>. If an Optionee dies while a Service Provider, the Option may be exercised within such period of time as is specified in the Award Agreement (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement), by the Optionee's estate or by a person who acquires the right to exercise the Option by bequest or inheritance, but only to the extent that the Option is vested and exercisable on the date of death. In the absence of a specified time in the Option Agreement, the Option shall remain exercisable for twelve (12) months following the Optionee's termination. If, at the time of death, the Optionee is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option shall immediately revert to the Plan. The Option may be exercised by the executor or administrator of the Optionee's estate or, if none, by the person(s) entitled to exercise the Option under the Optionee's will or the laws of descent or distribution. If the Option is not so exercised within he time specified herein, the Option shall terminate, and the Shares covered by such Option shall revert to the Plan.

9. Restricted Stock.

(a) <u>Grant of Restricted Stock.</u> Subject to the terms and conditions of the Plan, Restricted Stock may be granted to Service Providers at any time and from time to time as shall be determined by the Administrator, in its sole discretion. The Administrator shall have complete discretion to determine: (i) the number of Shares subject to a Restricted Stock award granted to any Participant, (ii) whether the form of the award shall be Shares or as its/rights to acquire Shares, and (iii) the conditions that must be satisfied, including performance-based milestones, upon which is conditioned the grant or vesting of Restricted Stock. For Restricted Stock granted in the form of units/rights to acquire Shares, each such unit/right shall be the equivalent of one Share

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of Common Stock for purposes of determining the number of Shares subject to an Award. Until the Shares are issued, no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the units/rights to acquire Shares. Exercise Price and other Terms. The Administrator, subject to the provisions of the Plan, shall have complete discretion to determine the terms and conditions of Restricted Stock granted under the Plan. Restricted Stock grants shall be subject to the terms, conditions, and restrictions determined by the Administrator at the time the stock is awarded, which may include such performance-based milestones as are determined appropriate by the Administrator. The Administrator may require the recipient to sign a Restricted Stock Agreement as a condition of the award. Any certificates representing the shares of Stock awarded shall bear such legends as shall be determined by the Administrator.

(b) <u>Restricted Stock Award Agreement.</u> Each Restricted Stock grant shall be evidenced by an Award Agreement that shall specify the purchase price and such other terms and conditions as the Administrator, in its sole discretion, shall determine; provided; however, that if the Restricted Stock grant has a purchase price, such purchase price must be paid no more than ten (10) years following the date of grant.

10. Stock Appreciation Rights.

- (a) <u>Grant of SARs.</u> Subject to the terms and conditions of the Plan, SARs may be granted to Service Providers at any time and from time to time as shall be determined by the Administrator, in its sole discretion. The Administrator shall have complete discretion to determine the number of SARs granted to any Participant.
- (b) Exercise Price and other Terms. The Administrator, subject to the provisions of the Plan, shall have complete discretion to determine the terms and conditions of SARs granted under the Plan; provided, however, that no SAR may have a term of more than ten (10) years from the date of grant.
- (c) <u>Payment of SAR Amount.</u> Upon exercise of a SAR, a Participant shall be entitled to receive payment from the Company in an amount determined by multiplying:
 - (i) The difference between the Fair Market Value of a Share on the date of exercise over the exercise price; times
 - (ii) The number of Shares with respect to which the SAR is exercised.
- (d) <u>Payment upon Exercise of SAR.</u> At the discretion of the Administrator, payment for a SAR may be in cash, Shares or a combination thereof.
- (e) <u>Cash Settlements and Plan Share Allocation.</u> Cash payments of Stock Appreciation Rights as well as Common Stock issued upon exercise of Stock Appreciation Rights shall be applied against the maximum number of shares of Common Stock that may be issued pursuant to the Plan. The number of shares to be applied against such maximum number of shares in such circumstances shall be the number of shares equal to the amount of the cash payment divided by the Fair Market Value of a share of Common Stock on the date the Stock Appreciation Right is granted.
- (f) <u>SAR Agreement</u>. Each SAR grant shall be evidenced by an Award Agreement that shall specify the exercise price, the term of the SAR, the conditions of exercise, and such other terms and conditions as the Administrator, in its sole discretion, shall determine.
- (g) Expiration of SARs. A SAR granted under the Plan shall expire upon the date determined by the Administrator, in its sole discretion, and set forth in the Award Agreement.
- (h) <u>Termination of Relationship as a Service Provider.</u> If a Participant ceases to be a Service Provider, other than upon the Participant's death or Disability, the Participant may exercise his or her Stock Appreciation Right within such period of time as is specified in the Award Agreement

to the extent that the Stock Appreciation Right is vested and exercisable on the date of termination (but in no event later than the expiration of the term of such Stock Appreciation Right as set forth in the Award Agreement). In the absence of a specified time in the Stock Appreciation Right Agreement, the Stock Appreciation Right shall remain exercisable for three (3) months following the Participant's termination. If, on the date of termination, the Participant is not vested as to his or her entire Stock Appreciation Right, the Shares covered by the unvested portion of the Stock Appreciation Right shall revert to the Plan. If, after termination, the Participant does not exercise his or her Stock Appreciation Right within the time specified by the Administrator, the Stock Appreciation Right shall terminate, and the Shares covered by such Stock Appreciation Right shall revert to the Plan. Notwithstanding the above, in the event of a Participant's change in status from Consultant, Employee or Director to Employee, Consultant or Director (e.g., an Inside Director becoming an Independent Director), a Participant's status as a Service Provider shall continue notwithstanding the change in status.

- (i) <u>Disability of Participant.</u> If a Participant ceases to be a Service Provider as a result of the Participant's Disability, the Participant may exercise his or her Stock Appreciation Right within such period of time as is specified in the Award Agreement to the extent the Stock Appreciation Right is vested and exercisable on the date of termination (but in no event later than the expiration of the term of such Stock Appreciation Right as set forth in the Award Agreement). In the absence of a specified time in the Award Agreement, the Stock Appreciation Right shall remain exercisable for twelve (12) months following the Participant's termination. If, on the date of termination, the Participant is not vested as to his or her entire Stock Appreciation Right, the Shares covered by the unvested portion of the Stock Appreciation Right shall revert to the Plan. If, after termination, the Participant does not exercise his or her Stock Appreciation Right within the time specified herein, the Stock Appreciation Right shall terminate, and the Shares covered by such Stock Appreciation Right shall revert to the Plan.
- (j) <u>Death of Participant.</u> If a Participant dies while a Service Provider, the Stock Appreciation Right may be exercised within such period of time as is specified in the Stock Appreciation Right Agreement (but in no event later than the expiration of the term of such Stock Appreciation Right as set forth in the Notice of Grant by the Participant's estate or by a person who acquires the right to exercise the Stock Appreciation Right by bequest or inheritance, but only to the extent that the Stock Appreciation Right is vested and exercisable on the date of death. In the absence of a specified time in the Award Agreement, the Stock Appreciation Right shall remain exercisable for twelve (12) months following the Participant's termination. If, at the time of death, the Participant is not vested as to his or her entire Stock Appreciation Right, the Shares covered by the unvested portion of the Stock Appreciation Right shall immediately revert to the Plan. The Stock Appreciation Right may be exercised by the executor or administrator of the Participant's estate or, if none, by the person(s) entitled to exercise the Stock Appreciation Right under the Participant's will or the laws of descent or distribution. If the Stock Appreciation Right is not so exercised within the time specified herein, the Stock Appreciation Right shall terminate, and the Shares covered by such Stock Appreciation Right shall revert to the Plan.
- 11. Option Grants to Independent Directors. All grants of Options to Independent Directors pursuant to this Section shall be made strictly in accordance with the following provisions:
- (a) <u>Nonstatutory Stock Options.</u> All Options granted pursuant to this Section shall be Nonstatutory Stock Options and, except as otherwise provided herein, shall be subject to the other terms and conditions of the Plan.
- (b) <u>Administration.</u> Option grants under this **Section 11** shall be administered by a committee consisting of the Company's Inside Directors; provided, however, that such committee shall not have any discretion to select which Independent Directors shall be granted Options under this **Section 11**.

- (c) <u>Initial Grant.</u> Each person who first becomes an Independent Director following the effective date of this Plan shall be automatically granted on the date on which he or she first becomes an Independent Director, whether through election by the stockholders of the Company or appointment by the Board to fill a vacancy, an Option to purchase 25,000 shares of Common Stock (the "Initial Grant"); provided, however, that an Inside Director who ceases to be an Inside Director and thereby becomes an Independent Director shall not receive an Initial Grant. Subject to accelerated vesting upon certain Change of Control transactions as specified in **Section 14(c)(i)**, the Initial Grant shall vest as to 25% of the shares subject thereto on the date that is six (6) months and one (1) day after the date of grant with an additional 25% vesting on each of the first three anniversaries of the date of grant, so as to be 100% vested on the third anniversary of the date of grant, subject to the Optionee remaining a director through such vesting dates.
- (d) Annual Grant. On the first Business Day after January 1 of each calendar year, each Independent Director shall be automatically granted an Option to purchase 15,000 (the "Annual Grants"). Subject to accelerated vesting upon certain Change of Control transactions as specified in **Section 14(c)(i)**, Annual Grants shall vest as to 25% of the shares subject thereto on the date that is six (6) months and one (1) day after the date of grant with an additional 25% vesting on each of the first three anniversaries of the date of grant, so as to be 100% vested on the third anniversary of the date of grant, subject to the Optionee remaining a director through such vesting dates.
 - (e) Other Option Terms. The other terms of each option granted pursuant to this **Section 11** shall be as follows:
 - (i) For options granted prior to the receipt of stockholder approval of the amendment and restatement of the Plan the option term shall be five (5) years. For options granted on or after the receipt of stockholder approval of the amendment and restatement of the Plan, the option term shall be ten (10) years.
 - (ii) The exercise price per Share shall be no less than 100% of the Fair Market Value per Share on the date of grant.
 - (iii) In the event an Optionee's service as a Director terminates more than six months following the commencement of service as an Independent Director, then the Option shall immediately accelerate as to one year's additional vesting or, with respect to an Annual Grant, as to the number of shares that would have vested on the day prior to the next regularly scheduled meeting of the stockholders. The Option shall remain exercisable, to the extent vested and exercisable on the date of termination of Board service, for one year following such termination date (but in no event longer than the original term of the Option); provided, however, that in the event of a Qualifying Board Retirement, the Option shall vest as to 100% of the Shares and shall remain exercisable for three years following such termination (but in no event longer than the original term of the Option); provided, further that in the event of the termination of service as an Independent Director due to the death or Disability of the Optionee while an Independent Director, the Option shall immediately accelerate as to one year's additional vesting or, with respect to an Annual Grant, as to the number of shares that would have vested on the day prior to the next regularly scheduled meeting of the stockholders. (or more, in any event, if the cessation of Board Service would have been a Qualifying Retirement) even if such termination of service is within six (6) months following the commencement of service as an Independent Director.
 - (iv) The permissible forms of consideration for exercising the option shall be the same as for discretionary options as specified in **Section 8(b)(iii)** hereof.
 - (v) The provisions of **Section 8(b)(iv)** hereof relating to stockholder rights shall also apply to options granted under this **Section 11**.

- (vi) The options granted under this **Section 11** shall be subject to the other terms and conditions set forth in the form of Award Agreement selected by the Committee, in their sole discretion.
- 12. <u>Leaves of Absence.</u> Unless the Administrator provides otherwise or as otherwise required by Applicable Laws, vesting of Awards granted hereunder shall cease commencing on the 91st day of any unpaid leave of absence and shall only recommence upon return to active service.
- 13. <u>Non-Transferability of Awards.</u> An Award may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution and may be exercised, during the lifetime of the Participant, only by the Participant.
 - 14. Adjustments Upon Changes in Capitalization, Dissolution, Liquidation or Change of Control.
 - (a) Changes in Capitalization. Subject to any required action by the stockholders of the Company, the number of shares of Common Stock covered by each outstanding Award, the number of shares of Common Stock which have been authorized for issuance under the Plan but as to which no Awards have yet been granted or which have been returned to the Plan upon cancellation or expiration of an Award, as well as the price per share of Common Stock covered by each such outstanding Award and the 162(m) annual share issuance limits under Section 6(c) shall be proportionately adjusted for any increase or decrease in the number of issued shares of Common Stock resulting from a stock split, reverse stock split, stock dividend, combination or reclassification of the Common Stock, or any other increase or decrease in the number of issued shares of Common Stock effected without receipt of consideration by the Company; provided, however, that conversion of any convertible securities of the Company shall not be deemed to have been "effected without receipt of consideration." Such adjustment shall be made by the Compensation Committee, whose determination in that respect shall be final, binding and conclusive. Except as expressly provided herein, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of shares of Common Stock subject to an Award.
 - (b) <u>Dissolution or Liquidation</u>. In the event of the proposed dissolution or liquidation of the Company, the Administrator shall notify each Participant as soon as practicable prior to the effective date of such proposed transaction. The Administrator in its discretion may provide for a Participant to have the right to exercise his or her Award until ten (10) days prior to such transaction as to all of the stock covered thereby, including Shares as to which the Award would not otherwise be vested or exercisable. In addition, the Administrator may provide that any Company repurchase option or forfeiture applicable to any Shares covered by an Award shall lapse as to all such Shares, provided the proposed dissolution or liquidation takes place at the time and in the manner contemplated. To the extent it has not been previously exercised, an Award will terminate immediately prior to the consummation of such proposed action.
 - (c) <u>Change of Control.</u> Upon the occurrence of a Change of Control (i) all Options and SARs then outstanding shall automatically become immediately exercisable in full and (ii) the restrictions and conditions on all Restricted Stock then outstanding, including any vesting conditions, shall be deemed waived.
- 15. <u>Award Date of Grant.</u> The date of grant of an Award shall be, for all purposes, the date on which the Administrator makes the determination granting such Award, or such other later date as is determined by the Administrator. Notice of the determination shall be provided to each Participant within a reasonable time after the date of such grant.

16. Amendment and Termination of the Plan.

- (a) Amendment and Termination: No Repricing. The Committee may at any time amend, alter, suspend or terminate the Plan; provided however, that other than in connection with adjustments pursuant to **Section 14(a)**, the terms of outstanding Options or SARS may not be amended to reduce the exercise price of outstanding Options or SARs, or to cancel outstanding Options or SARs, in exchange for cash, other incentive awards or Options or SARs with an exercise price that is less than the exercise price of the original Options or SARs, in each case without the approval of the stockholders of the Company.
- (b) <u>Stockholder Approval</u>. The Company shall obtain stockholder approval of any Plan amendment to the extent necessary and desirable to comply with Applicable Laws.
- (c) <u>Effect of Amendment or Termination.</u> No amendment, alteration, suspension or termination of the Plan shall impair the rights of any Participant, unless mutually agreed otherwise between the Participant and the Administrator, which agreement must be in writing and signed by the Participant and the Company. Termination of the Plan shall not affect the Administrator's ability to exercise the powers granted to it hereunder with respect to Awards granted under the Plan prior to the date of such termination.
- (d) Section 409A. Notwithstanding any provision of the Plan, to the extent that any Award would be subject to Section 409A of the Code, no such Award may be granted if it would fail to comply with the requirements of Section 409A of the Code. To the extent that the Administrator determines that the Plan or any Award is subject to Section 409A of the Code, notwithstanding anything to the contrary contained in the Plan or in any Award Agreement, the Administrator reserves the right to amend or terminate the Plan and/or amend, restructure, terminate or replace the Award in order to cause the Award to either not be subject to Section 409A of the Code or to comply with the applicable provisions of such section.

17. Conditions Upon Issuance of Shares.

- (a) <u>Legal Compliance</u>. Shares shall not be issued pursuant to the exercise or vesting of an Award unless the exercise or vesting of such Award and the issuance and delivery of such Shares shall comply with Applicable Laws and shall be further subject to the approval of legal counsel for the Company with respect to such compliance.
- (b) <u>Investment Representations.</u> As a condition to the exercise of an Award, the Company may require the person exercising such Award to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribute such Shares if, in the opinion of counsel for the Company, such a representation is required.
- 18. <u>Inability to Obtain Authority.</u> The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority shall not have been obtained.
- 19. <u>Reservation of Shares.</u> The Company, during the term of this Plan, will at all times reserve and keep available such number of Shares as shall be sufficient to satisfy the requirements of the Plan.

The Microfluidics International Corporation 2006 Stock Plan was adopted by the Board of Directors on April 19, 2006, and approved by the stockholders of the Company on June 20, 2006. The amendment and restatement of the 2006 Stock Plan was adopted by the Board of Directors of the Company on March 4, 2010, to be submitted to the stockholders of the Company for their approval at the annual meeting of stockholders scheduled for June 16, 2010.

Microfluidics International

30 Ossipee Rd P.O. BOX 9101 Newton, MA 02464

VOTE BY INTERNET www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

Electronic Delivery of Future PROXY MATERIALS

If you would like to reduce the costs incurred by our company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access stockholder communications electronically in future years.

VOTE BY PHONE 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we've provided or return to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

The Board of Directors recommends that you vote FOR the following:

1. Election of Directors

Nominees			For	Against	Abstain
01) Michael C. Ferrara	o	o	o		
02) George Uveges	o	o	o		
03) Leo Pierre Roy	O	O	0		
04) Eric G. Walters	O	O	0		
05) Henry Kay	O	O	0		
06) Stephen Robinson	o	O	O		
The Board of Directors recomme 2. To amend the 2006 Stock Plan 3. Proposal to ratify the Audit Con auditors for the fiscal year ending In their discretion, the proxies are thereof.	For o For o the meeting of	Against O Against O or any adjour	Abstain O Abstain O rnment		
Signature (PLEASE SIGN WITHIN BOX)	Date:	Signature (Joint Owners)	Date:		

MICROFLUIDICS INTERNATIONAL CORPORATION

This proxy is solicited by the Board of Directors Annual Meeting of Stockholders June 16, 2010 09:00 AM

The stockholder(s) hereby appoint(s) Peter Byczko, Vice President & Chief Accounting Officer and Phyllis A. Craine, Paralegal, or either of them, as proxies, each with the power to appoint his or her substitute, and hereby authorizes them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of Common Stock of MICROFLUIDICS INTERNATIONAL CORPORATION that the shareholders(s) is/are entitled to vote at the Annual Meeting of Stockholder(s) to be held at 09:00AM, EST on June 16, 2010, at the offices of the Company at 30 Ossipee Road, Newton, MA 02464-9101, and any adjournment of postponement thereof.

QuickLinks

IMPORTANT NOTICE REGARDING THE INTERNET AVAILABILITY OF PROXY MATERIALS FOR THE 2010 ANNUAL MEETING PROXY STATEMENT MEETING OF STOCKHOLDERS OF MICROFLUIDICS INTERNATIONAL CORPORATION TO BE HELD ON

June 16, 2010

PROPOSAL 1 ELECTION OF DIRECTORS

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Michael C. Ferrara

Peter F. Byczko

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OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END AS OF DECEMBER 31, 2009

OPTION EXERCISES AND STOCK VESTED FOR THE YEAR ENDED DECEMBER 31, 2009

DIRECTOR COMPENSATION FOR THE YEAR ENDED DECEMBER 31, 2009

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

PROPOSAL 2 AMENDMENTS TO COMPANY'S 2006 STOCK PLAN

PROPOSAL 3 RATIFICATION OF THE BOARD OF DIRECTORS' APPOINTMENT OF AUDITORS

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AUDIT COMMITTEE REPORT

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