
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): October 19, 1998

OXIS INTERNATIONAL, INC.

(Exact name of registrant as specified in its charter)

DELAWARE 0-8092 94-1620407
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(State or Other (Commission File Number) (IRS Employer Identification
Jurisdiction of No.)
Incorporation)

6040 N. CUTTER CIRCLE, SUITE 317, PORTLAND, OREGON 97217-3935

(Address of Principal Executive Offices)

(503) 283-3911

(Registrant's Telephone Number, Including Area Code)

Not Applicable

(Former Name or Former Address, if Changed Since Last Report.)

ITEM 5. OTHER EVENTS

On October 19, 1998, OXIS International, Inc., a Delaware corporation (the "Company"), announced the filing with the office of the Secretary of State of Delaware a Certificate of Amendment amending its Restated Certificate of Incorporation to effectuate a one-for-five reverse stock split (the "Reverse Split") and announced that trading would commence on a post-split basis as of October 21, 1998. On October 21, 1998, the Company amended its Restated Certificate of Incorporation to effectuate the Reverse Split. Attached hereto as Exhibit 3(a) is the Second Restated Certificate of Incorporation of the Company and all amendments thereto and as Exhibit 99.1 is the Company's press release dated October 19, 1998.

ITEM 7. FINANCIAL STATEMENTS, PRO FORMA FINANCIAL INFORMATION AND EXHIBITS

(c)
Exhibit Number Exhibit
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3(a) Restated Certificate of Incorporation, as

amended to date

99.1 OXIS International, Inc. Press Release
dated October 19, 1998.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

DATED: October 27, 1998 OXIS INTERNATIONAL, INC.

By: /s/ Ray R. Rogers

Name: Ray R. Rogers

Title: Chairman

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EXHIBIT INDEX

Exhibit No.	Description	Page No. in Sequentially Numbered Current Report
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3(a)	Restated Certificate of Incorporation, as amended to date.	___
99.1	OXIS International, Inc. Press Release dated October 19, 1998.	___

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EXHIBIT 3(a)

SECOND RESTATED CERTIFICATE OF INCORPORATION OF

OXIS INTERNATIONAL, INC.

UNDER SECTION 242 AND SECTION 245 OF THE GENERAL CORPORATION LAW

OF THE STATE OF DELAWARE

We, RAY R. ROGERS, Chairman of the Board, and JON S. PITCHER, Secretary, of OXIS INTERNATIONAL, INC., a Delaware corporation organized and existing under the General Corporation Law of the State of Delaware, HEREBY CERTIFY that:

1. The name of the corporation is OXIS INTERNATIONAL, INC.
2. The original Certificate of Incorporation was filed under the name of Diagnostic Data, Inc. on October 15, 1973.
3. On March 11, 1985, the corporation changed the name of the corporation to DDI Pharmaceuticals, Inc., and another name change to OXIS INTERNATIONAL, INC. was effected on September 7, 1994.
4. This Second Restated Certificate of Incorporation restates and integrates and further amends the provisions of the corporation's original Certificate of Incorporation.
5. This Second Restated Certificate of Incorporation has been duly adopted in accordance with Section 242 and Section 245 of the General Corporation Law of the State of Delaware and the text of such Second Restated Certificate of Incorporation is as follows:

EXHIBIT 3(a)

SECOND RESTATED CERTIFICATE OF INCORPORATION

OF

OXIS INTERNATIONAL, INC.

FIRST: The name of the corporation (hereinafter called "Company" or "Corporation") is OXIS INTERNATIONAL, INC.

SECOND: The registered office of the Company in the State of Delaware is located at Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801, in the County of New Castle. The name of its registered agent at that address is The Corporation Trust Company.

THIRD: The purpose of the Company is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH:

I. COMMON STOCK

The Company is authorized to issue a total of Forty Million (40,000,000) shares of Common Stock, each of which shares of Common Stock has a par value of Fifty Cents (\$0.50). Dividends may be paid on the Common Stock as and when declared by the Board of Directors, out of any funds of the Company legally available for the payment of such dividends, and each share of Common Stock will be entitled to one vote on all matters on which such stock is entitled to vote. All duly authorized One Dollar (\$1.00) par value shares outstanding shall be deemed shares having a par value of Fifty Cents (\$0.50).

II. PREFERRED STOCK

The Company is authorized to issue a total of Fifteen Million (15,000,000) shares of Preferred Stock (\$0.01 par value), each of which shares of Preferred Stock may be issued in one or more series of stock within the class of Preferred Stock. Each series may have such voting powers, full or limited, or no voting powers, and such designations, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions thereof, as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors pursuant to authority hereby expressly vested in it by the provisions of this Second Restated Certificate of Incorporation.

A. SERIES A PREFERRED STOCK. A series of the class of Preferred Stock

of the Company shall be hereby created, and the shares of such series shall be designated as "Series A Preferred Stock." The number of shares of the class of Preferred Stock shall be 100,000, and the preferences and rights of the shares of such series shall be the same as the rights of the shares of Common Stock of the Company except that the shares of such series shall have no voting power and that in the event of any liquidation, dissolution, or winding up of the Company, the holders of the Series A Preferred Stock shall be entitled to receive prior to and in preference to any

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distribution of any assets or surplus funds of the Company to the holders of Common Stock by reason of their ownership thereof, the amount of \$.01 per share. If at any time and from time to time any holder of shares of Series A Preferred Stock owns less than 4.99% of the then outstanding shares of the Common Stock of the Company, a portion of such holder's shares of Series A Preferred Stock shall automatically convert into shares of the Company's Common Stock (on the basis of one share of Series A Preferred Stock converting into one fully paid and nonassessable share of Common Stock of the Company) until such holder owns 4.99% of the then outstanding shares of the Company's Common Stock.

B. SERIES B PREFERRED STOCK. A series of the class of Preferred Stock

of the Company shall be hereby created, and the shares of such series shall be designated as "Series B Preferred Stock", par value \$0.01 per share. The number of shares constituting such series shall be 642,583 and the rights, preferences, privileges and restrictions granted to or imposed upon the Series B Preferred Stock are as follows:

1. Series B Dividends.

(a) The holders of outstanding Series B Preferred Stock shall be entitled to receive in any fiscal year, when, as and if declared by the Board of Directors, out of any assets at the time legally available therefor, dividends at the rate of \$0.115 per share of Series B Preferred Stock per annum before any dividend or distribution (other than pursuant to Section B.4) is paid on Common Stock. Such dividend or distribution may be payable annually or otherwise as the Board of Directors may from time to time determine. Dividends or distributions (other than dividends payable solely in shares of Common Stock or distributions pursuant to Section B.4) of up to \$0.115 per share may be declared and paid upon shares of Common Stock in any fiscal year of the Corporation only if dividends shall have been paid on and declared and set apart upon all shares of Series B Preferred Stock at such annual rate in such year. After dividends or distributions of \$0.115 per share have been declared and paid on the Common Stock in any fiscal year, all further dividends and distributions during such fiscal year shall be distributed among the holders of the Common Stock and the Series B Preferred Stock in proportion to the shares of Common Stock then held by them and the shares of Common Stock which they then have the right to acquire upon conversion of the shares of Series B Preferred Stock then held by them. The right to such dividends on shares of Series B Preferred Stock shall not be cumulative and no right shall accrue to holders of shares of Series B Preferred Stock by reason of the fact that dividends on said shares are not declared in any prior year, nor shall any undeclared or unpaid dividend bear or accrue interest.

2. Series B Voting Rights.

(a) Each holder of shares of Series B Preferred Stock shall be

entitled to the number of votes equal to the number of shares of Common Stock into which such holder's shares of Series B Preferred Stock could be converted on the record date for the vote or consent of stockholders and, except as otherwise provided herein, shall have voting rights and powers equal to the voting rights and powers of the Common Stock. The holder of each share of Series B Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the

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Bylaws of the Corporation and shall vote with holders of the Common Stock upon the election of directors and upon any other matter submitted to a vote of stockholders, except those matters required by law to be submitted to a class or series vote and except as otherwise provided in Section B.2(b) hereof. Fractional votes by the holders of Series B Preferred Stock shall not, however, be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares into which shares of Series B Preferred Stock held by each holder could be converted) shall be rounded to the nearest whole number.

(b) The number of directors shall be set as provided in the Bylaws of the Corporation. So long as any shares of Series B Preferred Stock remain outstanding, the holders of the Series B Preferred Stock outstanding shall vote together with the Common Stock as a single class with respect to the election of directors.

3. Series B Conversion. The holders of Series B Preferred Stock

shall have conversion rights as follows (the "Conversion Rights");

(a) Right to Convert. Each share of Series B Preferred Stock

shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share at the office of the Corporation or any transfer agent for such stock, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing \$2.33433 by the Series B Conversion Price, determined as hereinafter provided, in effect on the date the certificate is surrendered for conversion. The price at which shares of Common Stock shall be deliverable upon conversion of shares of the Series B Preferred Stock (the "Series B Conversion Price") shall initially be \$2.33433 per share of Common Stock. Such initial Series B Conversion Price shall be adjusted as hereinafter provided.

(b) Automatic Conversion. Each share of Series B Preferred

Stock shall automatically be converted into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing \$2.33433 by the Series B Conversion Price, in effect on the date of the receipt by the Corporation of the written consent to, or request for, such conversion from holders of at least three-fourths (3/4) of the Series B Preferred Stock then outstanding.

(c) Mechanics of Conversion.

(i) Before any holder of Series B Preferred Stock shall be entitled to convert the same into shares of Common Stock, he shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for such stock, and shall give written notice to the Corporation at such office that he elects to convert the same and shall state therein the name or names in which he wishes the certificate or certificates for shares of Common Stock to be issued. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Series B Preferred Stock, a certificate or certificates for the number of shares of Common Stock to which he shall be entitled as aforesaid. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of surrender of the shares of Series B Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable

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upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on such date.

(ii) If a voluntary conversion is made in connection with an underwritten offering of securities pursuant to a registration statement filed pursuant to the Securities Act of 1933, as amended (the "Securities Act"), the conversion may, at the option of any holder tendering shares of Series B Preferred Stock for conversion, be conditioned upon the closing with the underwriters of the sale of securities pursuant to such offering, in which event the person(s) entitled to receive the Common Stock upon conversion of the Series B Preferred Stock shall not be deemed to have converted such Series B Preferred Stock until immediately prior to the closing of such sale of securities.

(d) Adjustments for Stock Dividends, Subdivisions, or Split-ups

of Common Stock. If the number of shares of Common Stock outstanding at any

time after the filing of the original Certificate of Designation with respect to the Series B Preferred Stock (July 19, 1995) is increased by a stock dividend payable in shares of Common Stock or by a subdivision or split-up of shares of Common Stock, then, effective at the close of business upon the record date fixed for the determination of holders of Common Stock entitled to receive such stock dividend, subdivision or split-up, the Conversion Price for the Series B Preferred Stock shall be appropriately decreased so that the number of shares of Common Stock issuable on conversion of each share of Series B Preferred Stock shall be increased in proportion to such increase of outstanding shares of Common Stock.

(e) Adjustments for Combinations of Common Stock. If the

number of shares of Common Stock outstanding at any time after the filing of the original Certificate of Designation with respect to the Series B Preferred Stock (July 19, 1995) is decreased by a combination of the outstanding shares of Common Stock, then, effective at the close of business upon the record date of such combination, the Conversion Price for the Series B Preferred Stock shall be appropriately increased so that the number of shares of Common Stock issuable on conversion of each share of Series B Preferred Stock shall be decreased in proportion to such decrease in outstanding shares of Common Stock.

(f) Adjustments for Other Distributions. In the event the

Corporation at any time or from time to time makes, or fixes a record date for the determination of holders of Common Stock entitled to receive any distribution payable in securities of the Corporation other than shares of Common Stock, then and in each such event provision shall be made so that the holders of Series B Preferred Stock shall receive upon conversion thereof, in addition to the number of shares of Common Stock receivable thereupon, the amount of securities of the Corporation which they would have received had their Series B Preferred Stock been converted into Common Stock on the date of such event and had they thereafter, during the period from the date of such event to and including the date of conversion, retained such securities receivable by them as aforesaid during such period, subject to all other adjustments called for during such period under this Section B.3(f) with respect to the rights of the holders of the Series B Preferred Stock.

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(g) Adjustments for Reorganizations, Reclassifications, etc.

If the Common Stock issuable upon conversion of the Series B Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock or other securities or property, whether by reclassification, a merger or consolidation of this Corporation with or into any other corporation or corporations, or a sale of all or substantially all of the assets of this Corporation, or otherwise, the Conversion Price then in effect shall, concurrently with the effectiveness of such reorganization or reclassification, be proportionately adjusted such that the Series B Preferred Stock shall be convertible into, in lieu of the number of shares of Common Stock which the holders would otherwise have been entitled to receive, a number of shares of such other class or classes of stock or securities or other property equivalent to the number of shares of Common Stock that would have been subject to receipt by the holders upon conversion of the Series B Preferred Stock immediately before such event; and, in any such case, appropriate adjustment (as determined by the Board) shall be made in the application of the provisions herein set forth with respect to the rights and interests thereafter of the

holders of the Series B Preferred Stock, to the end that the provisions set forth herein (including provisions with respect to changes in and other adjustments of the Conversion Price) shall thereafter be applicable, as nearly as may be reasonable, in relation to any shares of stock or other property thereafter deliverable upon the conversion of the Series B Preferred Stock.

(h) Certificates as to Adjustments. Upon the occurrence of each

adjustment or readjustment of the Series B Conversion Price pursuant to this Section B.3, the Corporation at its expense shall promptly compute such adjustment or readjustment in accordance with the terms hereof and prepare and furnish to each holder of Series B Preferred Stock a certificate executed by the Corporation's President or Chief Financial Officer setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, upon the written request at any time of any holder of Series B Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (A) such adjustments and readjustments, (B) the Conversion Price for such Series B Preferred Stock at the time in effect, and (C) the number of shares of Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of the Series B Preferred Stock.

(i) Notices of Record Date. In the event that the Corporation

shall propose at any time: (a) to declare any special dividend or distribution upon its Common Stock, whether in cash, property, stock or other securities, whether or not out of earnings or earned surplus; (b) to offer for subscription pro rata to the holders of any class or series of its stock any additional shares of stock of any class or series or other rights; (c) to effect any reclassification or recapitalization of its Common Stock outstanding involving a change in the Common Stock; or (d) to merge or consolidate with or into any other corporation (other than a mere reincorporation transaction), or sell, lease or convey all or substantially all of its assets, or to liquidate, dissolve or wind up; then, in connection with each such event, the Corporation shall send to the holders of Series B Preferred Stock:

(i) at least twenty (20) days' prior written notice of the date on which a record shall be taken for such dividend, distribution or subscription rights (and

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specifying the date on which the holders of Common Stock shall be entitled thereto) or for determining rights to vote, if any, in respect of the matters referred to in (c) and (d) above; and

(ii) In the case of the matters referred to in (c) and (d) above, at least twenty (20) days' prior written notice of the date when the same shall take place (and specifying the date on which the holders of Common Stock shall be entitled to exchange their Common Stock for securities or other property deliverable upon the occurrence of such event).

(j) Reservation of Stock Issuable Upon Conversion. The

Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of the Series B Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Series B Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Series B Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose, including, without limitation, engaging in its best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation.

(k) Fractional Shares. No fractional share shall be issued

upon the conversion of any share or shares of Series B Preferred Stock. All shares of Common Stock (including fractions thereof) issuable upon conversion of more than one share of Series B Preferred Stock by a holder thereof shall be

aggregated for purposes of determining whether the conversion would result in the issuance of any fractional share. If, after the aforementioned aggregation, the conversion would result in the issuance of a fraction of a share of Common Stock, the Corporation shall, in lieu of issuing any fractional share, pay the holder otherwise entitled to such fraction a sum in cash equal to the fair market value of such fraction on the date of conversion (as determined in good faith by the board of directors of the Corporation).

(l) Notices. Any notice required by the provisions of this

Section B.3 to be given to the holders of shares of Series B Preferred Stock shall be deemed given on the date of delivery if delivered by hand delivery or by facsimile, or, if deposited in the United States mail (registered or certified), postage prepaid, and addressed to each holder of record at his or its address appearing on the books of the Corporation.

4. Series B Liquidation Preferences.

(a) In the event of any liquidation, dissolution or winding up of the Corporation whether voluntary or involuntary, the holders of the Series B Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds of the Corporation to the holders of Common Stock or any other shares of this corporation other than Series B Preferred Stock by reason of their ownership thereof, the amount of \$2.33433 per share (as adjusted for any stock dividends, combinations or splits with respect to such shares), plus all declared or accrued but unpaid, dividends on such share, for each share of Series B Preferred Stock then held by them. If upon the occurrence of such event, the assets and funds

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thus distributed among the holders of the Series B Preferred Stock shall be insufficient to permit the payment to such holders of the full aforesaid preferential amount, then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of the Series B Preferred Stock in proportion to the preferential amount each such holder is otherwise entitled to receive.

(b) After the payment to the holders of the Series B Preferred Stock of the amounts set forth in Section B.4(a) above, the holders of the Common Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds of the Corporation to the holders of the other capital stock of the Company by reason of their ownership thereof, an aggregate distribution equal to the total consideration received by the Corporation for the sale and issuance of all issued and outstanding Series B Preferred Stock, with each holder of Common Stock participating on a pro rata basis based on the number of shares of Common Stock they own. If upon the occurrence of such event, the assets and funds thus distributed among the holders of the Common Stock shall be insufficient to permit the payment to such holders of the full aforesaid preferential amount, then all assets and funds of the Corporation legally available for distribution after the payment to the holders of the Series B Preferred Stock of the amounts set forth in Section B.4(a) shall be distributed ratably among the holders of the Common Stock in proportion to the preferential amount each such holder is otherwise entitled to receive.

(c) After payments to (i) the holders of the Series B Preferred Stock of the amounts set forth in Section B.4(a) above, and (ii) the holders of the Common Stock of the amounts set forth in Section B.4(b) above, the entire remaining assets and funds of the Corporation legally available for distribution, if any, shall be distributed among the holders of the Common Stock and the Series B Preferred Stock in proportion to the shares of Common Stock then held by them and the shares of Common Stock which they then have the right to acquire upon conversion of the shares of Series B Preferred Stock then held by them.

5. Series B Protective Provisions. In addition to any other

rights provided by law, so long as any share of Series B Preferred Stock shall be outstanding, the Corporation shall not, without first obtaining the affirmative vote or written consent of the holders of the majority of the outstanding shares of Series B Preferred Stock voting separately as a separate

class, take any action which alters or changes any of the rights, privileges or preferences of the Series B Preferred Stock, including without limitation increasing or decreasing the aggregate number of authorized shares of such series other than an increase incident to a stock split.

C. SERIES C PREFERRED STOCK. A series of the class of Preferred

Stock of the Company shall be hereby created, and the shares of such series shall be designated as "Series C Preferred Stock", par value \$0.01 per share. The number of shares constituting such series shall be 3,076,923 and the rights, preferences, privileges and restrictions granted to or imposed upon the Series C Preferred Stock are as follows:

1. Series C Dividends.

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(a) The holders of outstanding Series C Preferred Stock shall be entitled to receive in any fiscal year, when, as and if declared by the Board of Directors, after the payment of dividends on Series B Preferred Stock, out of any assets at the time legally available therefor, dividends in amounts determined by the Corporation's Board of Directors before any other dividend or distribution (other than pursuant to Section C.4, or distributions with respect to the Series B Preferred Stock) is paid on Common Stock. Such dividend or distribution may be payable annually or otherwise as the Board of Directors may from time to time determine. The right to such dividends on shares of Series C Preferred Stock shall not be cumulative and no right shall accrue to holders of shares of Series C Preferred Stock by reason of the fact that dividends on said shares are not declared in any prior year, nor shall any undeclared or unpaid dividend bear or accrue interest.

2. Series C Voting Rights. Each holder of shares of Series C

Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which such holder's shares of Series C Preferred Stock could be converted on the record date for the vote or consent of stockholders multiplied by the Voting Power Fraction and, except as otherwise provided herein, shall have voting rights and powers equal to the voting rights and powers of the Common Stock. The Voting Power Fraction shall equal \$1.30 divided by the average closing bid price of the Company's Common Stock during

the 15 consecutive trading days immediately prior to the date the Series C Preferred was purchased (the "Average Closing Price"); but in no event shall be greater than one (1). The holder of each share of Series C Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Corporation and shall vote with holders of the Common Stock upon the election of directors and upon any other matter submitted to a vote of stockholders, except those matters required by law to be submitted to a class or series vote. Fractional votes by the holders of Series C Preferred Stock shall not, however, be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares into which shares of Series C Preferred Stock held by each holder could be converted) shall be rounded to the nearest whole number.

3. Series C Conversion. The holders of Series C Preferred Stock

shall have conversion rights as follows (the "Conversion Rights"):

(a) Right to Convert. Each share of Series C Preferred

Stock shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share at the office of the Corporation or any transfer agent for such stock, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing \$1.30 by the Series C Conversion Price, determined as hereinafter provided, in effect on the date the certificate is surrendered for conversion. The Series C Conversion Price shall initially be \$1.30. Such initial Series C Conversion Price shall be adjusted as hereinafter provided.

(b) Mechanics of Conversion.

(i) Before any holder of Series C Preferred Stock shall be entitled to convert the same into shares of Common Stock, he shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for

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such stock, and shall give written notice to the Corporation at such office that he elects to convert the same and shall state therein the name or names in which he wishes the certificate or certificates for shares of Common Stock to be issued. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Series C Preferred Stock, a certificate or certificates for the number of shares of Common Stock to which he shall be entitled as aforesaid. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of surrender of the shares of Series C Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on such date.

(ii) If a voluntary conversion is made in connection with an underwritten offering of securities pursuant to a registration statement filed pursuant to the Securities Act of 1933, as amended (the "Securities Act"), the conversion may, at the option of any holder tendering shares of Series C Preferred Stock for conversion, be conditioned upon the closing with the underwriters of the sale of securities pursuant to such offering, in which event the person(s) entitled to receive the Common Stock upon conversion of the Series C Preferred Stock shall not be deemed to have converted such Series C Preferred Stock until immediately prior to the closing of such sale of securities.

(c) Adjustments for Stock Dividends, Subdivisions, or

Split-ups of Common Stock. If the number of shares of Common Stock outstanding

at any time after the filing of the original Certificate of Designation with respect to the Series C Preferred Stock (February 8, 1996) is increased by a stock dividend payable in shares of Common Stock or by a subdivision or split-up of shares of Common Stock, then, effective at the close of business upon the record date fixed for the determination of holders of Common Stock entitled to receive such stock dividend, subdivision or split-up, the Series C Conversion Price shall be appropriately decreased so that the number of shares of Common Stock issuable on conversion of each share of Series C Preferred Stock shall be increased in proportion to such increase of outstanding shares of Common Stock.

(d) Adjustments for Combinations of Common Stock. If the

number of shares of Common Stock outstanding at any time after the filing of the original Certificate of Designation with respect to the Series C Preferred Stock (February 8, 1996) is decreased by a combination of the outstanding shares of Common Stock, then, effective at the close of business upon the record date of such combination, the Series C Conversion Price shall be appropriately increased so that the number of shares of Common Stock issuable on conversion of each share of Series C Preferred Stock shall be decreased in proportion to such decrease in outstanding shares of Common Stock.

(e) Adjustments for Other Distributions. In the event the

Corporation at any time or from time to time makes, or fixes a record date for the determination of holders of Common Stock entitled to receive any distribution payable in securities of the Corporation other than shares of Common Stock, then and in each such event provision shall be made so that the holders of Series C Preferred Stock shall receive upon conversion thereof, in addition to the

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number of shares of Common Stock receivable thereupon, the amount of securities of the Corporation which they would have received had their Series C Preferred Stock been converted into Common Stock on the date of such event and had they thereafter, during the period from the date of such event to and including the date of conversion, retained such securities receivable by them as aforesaid during such period, subject to all other adjustments called for during such period under this Section C.3(e) with respect to the rights of the holders of

the Series C Preferred Stock.

(f) Adjustments for Reorganizations, Reclassifications, etc. If the

Common Stock issuable upon conversion of the Series C Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock or other securities or property, whether by reclassification, a merger or consolidation of this Corporation with or into any other corporation or corporations, or a sale of all or substantially all of the assets of this Corporation, or otherwise, the Series C Conversion Price then in effect shall, concurrently with the effectiveness of such reorganization or reclassification, be proportionately adjusted such that the Series C Preferred Stock shall be convertible into, in lieu of the number of shares of Common Stock which the holders would otherwise have been entitled to receive, a number of shares of such other class or classes of stock or securities or other property equivalent to the number of shares of Common Stock that would have been subject to receipt by the holders upon conversion of the Series C Preferred Stock immediately before such event; and, in any such case, appropriate adjustment (as determined by the Board) shall be made in the application of the provisions herein set forth with respect to the rights and interests thereafter of the holders of the Series C Preferred Stock, to the end that the provisions set forth herein (including provisions with respect to changes in and other adjustments of the Series C Conversion Price) shall thereafter be applicable, as nearly as may be reasonable, in relation to any shares of stock or other property thereafter deliverable upon the conversion of the Series C Preferred Stock.

(g) Certain Other Adjustment. If at any time after six (6) months

following the consummation ("Closing") of the sale of Series C Preferred Stock purchased pursuant to those certain Subscription and Purchase Agreements between the Corporation and each holder of such Series C Preferred Stock (such Closing having occurred on May 9, 1996), any such holder converts the Series C Preferred Stock, then the Series C Conversion Price applicable to such holder's shares shall be the lesser of (i) \$1.30, or (ii) the greater of (x) .90 or (y) 80% of the average closing bid price of the Common Stock for the fifteen (15) consecutive trading days ending on the date immediately preceding the date notice of conversion is given. The Series C Conversion Price may only adjust once for each holder.

(h) Company's Right to Automatically Convert. If at any time after

eight (8) months following the Closing the average closing bid price of the Corporation's Common Stock for 15 consecutive trading days as quoted on the Nasdaq National Market is equal to or greater than \$2.60, the Corporation shall thereafter have the right to automatically convert the Series C Preferred Stock into such number of shares of Common Stock as is determined by dividing \$1.30 by the then applicable Series C Conversion Price by notice given to such holders of Series C Preferred Stock.

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(i) Certificates as to Adjustments. Upon the occurrence of each

adjustment of the Series C Conversion Price pursuant to this Section C.3, the Corporation at its expense shall promptly compute such adjustment in accordance with the terms hereof and prepare and furnish to each applicable holder of Series C Preferred Stock a certificate executed by the Corporation's President or Chief Financial Officer setting forth such computation of adjustment.

(j) Notices of Record Date. In the event that the Corporation shall

propose at any time: (a) to declare any special dividend or distribution upon its Common Stock, whether in cash, property, stock or other securities, whether or not out of earnings or earned surplus; (b) to offer for subscription pro rata to the holders of any class or series of its stock any additional shares of stock of any class or series or other rights; (c) to effect any reclassification or recapitalization of its Common Stock outstanding involving a change in the Common Stock; or (d) to merge or consolidate with or into any other corporation (other than a mere reincorporation transaction), or sell, lease or convey all or substantially all of its assets, or to liquidate, dissolve or wind up; then, in connection with each such event, the Corporation shall send to the holders of Series C Preferred Stock:

(i) at least twenty (20) days' prior written notice of the date on which a record shall be taken for such dividend, distribution or subscription rights (and specifying the date on which the holders of Common Stock shall be entitled thereto) or for determining rights to vote, if any, in respect of the matters referred to in (c) and (d) above; and

(ii) in the case of the matters referred to in (c) and (d) above, at least twenty (20) days' prior written notice of the date when the same shall take place (and specifying the date on which the holders of Common Stock shall be entitled to exchange their Common Stock for securities or other property deliverable upon the occurrence of such event).

(k) Reservation of Stock Issuable Upon Conversion. The Corporation

shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of the Series C Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Series C Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Series C Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose, including, without limitation, engaging in its best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation.

(l) Fractional Shares. No fractional share shall be issued upon the

conversion of any share or shares of Series C Preferred Stock. All shares of Common Stock (including fractions thereof) issuable upon conversion of more than one share of Series C Preferred Stock by a holder thereof shall be aggregated for purposes of determining whether the conversion would result in the issuance of any fractional share. If, after the aforementioned

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aggregation, the conversion would result in the issuance of a fraction of a share of Common Stock, the Corporation shall, in lieu of issuing any fractional share, pay the holder otherwise entitled to such fraction a sum in cash equal to the fair market value of such fraction on the date of conversion (as determined in good faith by the board of directors of the Corporation).

(m) Notices. Any notice required by the provisions of this Section

C.3 to be given to the holders of shares of Series C Preferred Stock shall be deemed given on the date of delivery if delivered by hand delivery or by facsimile, or, if deposited in the United States mail (registered or certified), postage prepaid, and addressed to each holder of record at his or its address appearing on the books of the Corporation.

4. Series C Liquidation Preferences. In the event of any liquidation,

dissolution or winding up of the Corporation whether voluntary or involuntary, the holders of the Series C Preferred Stock shall participate on an equal basis with the holders of the Common Stock (as if the Series C Preferred Stock had converted into Common Stock) in any distribution of any of the assets or surplus funds of the Corporation.

5. Series C Protective Provisions. In addition to any other rights

provided by law, so long as any share of Series C Preferred Stock shall be outstanding, the Corporation shall not, without first obtaining the affirmative vote or written consent of the holders of the majority of the outstanding shares of Series C Preferred Stock voting separately as a separate class, take any action which alters or changes any of the rights, privileges or preferences of the Series C Preferred Stock, including without limitation increasing or decreasing the aggregate number of authorized shares of such series other than an increase incident to a stock split.

D. SERIES D PREFERRED STOCK. A series of the class of Preferred Stock of the

Company shall be hereby created, and the shares of such series shall be designated as "Series D Preferred Stock", par value \$0.01 per shares. The number of shares constituting such series shall be 2,000 and the stated value shall be One Thousand Dollars (\$1,000) per share (the "Stated Value").

1. Rank With Respect to Liquidation Event. In the event of any

distribution of assets upon liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, the holders of Series D Preferred Stock shall participate on an equal basis with (i) the holders of the Corporation's Common Stock, par value \$.50 per share (the "Common Stock"), as if the Series D Preferred Stock had converted into Common Stock; (ii) the holders of the Corporation's Series C Preferred Stock, par value \$.01 per share (the "Series C Preferred Stock"); and (iii) the holders of any class or series of capital stock of the Corporation hereafter created (with the consent of the holders of Series D Preferred Stock obtained in accordance with Section 7 hereof) which specifically, by its terms, ranks pari passu with the Series D Preferred Stock (collectively, with the Common Stock and the Series C Preferred Stock, "Pari Passu Securities").

2. No Dividends,

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The Series D Preferred Stock will bear no dividends, and the holders of the Series D Preferred Stock shall not be entitled to receive dividends on the Series D Preferred Stock.

3. Cash Redemption of Premium by Corporation; Redemption of Series D

Preferred Stock.

(a) The Corporation shall have the right, in its sole discretion, upon receipt of a Notice of Conversion pursuant to Section 4(d) or in the event of a Mandatory Conversion effected in accordance with Section 5 hereof, to redeem all or any portion of the Premium (as defined in Section 4(a) below) subject to such conversion for a sum of cash equal to the amount of the Premium being so redeemed. All cash redemption payments hereunder shall be paid in lawful money of the United States of America at such address for the holder as appears on the record books of the Corporation (or at such other address as such holder shall hereafter give to the Corporation by written notice). In the event the Corporation elects, pursuant to this Section 3(a), to redeem all or any portion of the Premium in cash and fails to pay such holder the applicable redemption amount to which such holder is entitled by depositing a check in the U.S. Mail to such holder within seven (7) business days of receipt by the Corporation of a Conversion Notice (in the case of a redemption in connection with an Optional Conversion) or May 15, 2001 (in the case of a redemption in connection with a Mandatory Conversion), the Corporation shall thereafter forfeit its right to redeem such Premium in cash and such Premium shall thereafter be converted into shares of Common Stock in accordance with Section 4 hereof.

(b) Each holder of Series D Preferred Stock shall have the right to require the Corporation to provide advance notice to such holder stating whether the Corporation will elect to redeem all or any portion of the Premium in cash pursuant to the Corporation's redemption rights discussed in Section D.3(a) as set forth herein. A holder may exercise such right from time to time by sending notice (an "Election Notice") to the Corporation, by facsimile, requesting that the Corporation disclose to such holder whether the Corporation would elect to redeem any portion of the Premium for cash in lieu of issuing Common Stock in accordance with Section 4 hereof if such holder were to exercise his, her or its right of conversion pursuant to Section 4. The Corporation shall, no later than the fifth (5th) business day following receipt of an Election Notice, disclose to such holder, whether the Corporation would elect to redeem any portion of a Premium in connection with a conversion pursuant to a Conversion Notice delivered over the subsequent ten (10) business day period. If the Corporation does not respond to such holder within such five (5) business day period via facsimile, the Corporation shall, with respect to any conversion pursuant to a Conversion Notice delivered within the subsequent ten (10) business day period, forfeit its right to redeem such Premium in accordance with Section D.3(a) and shall be required to convert such Premium into shares of Common Stock in

accordance with Section 4 hereof.

(c) Except as provided in Section D.3 and Section D.4 hereof, the Series D Preferred Stock is not subject to redemption.

(d) Commencing May 15, 1998, at any time that the average of the closing bid prices for the Common Stock on NASDAQ, or on the principal securities exchange

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or other securities market on which the Common Stock is being traded, for the twenty (20) consecutive Trading Days ending one Trading Day prior to the date the Corporation provides the holders a Redemption Notice (as defined herein) under this Section D.3 is equal to or greater than 200% of the closing bid price for the Common Stock on NASDAQ (or on the principal securities exchange or other securities market on which the Common Stock is being traded) on the Closing Date (as defined herein) (the "Optional Redemption Threshold Price"), the Corporation shall have the right, in its sole discretion, to redeem ("Redemption at Corporation's Election") any or all of the Series D Preferred Stock at the Redemption Price (as defined herein), in accordance with the redemption procedures set forth below; provided, however, that if the average closing bid price of the Common Stock for any ten (10) consecutive Trading Days after a Redemption Notice is less than 75% of the Optional Redemption Threshold Price, the Corporation's Redemption Notice shall thereafter be rendered null and void and the Corporation shall not have the right to redeem the Series D Preferred Stock pursuant to the terms of this Section D.3 unless and until it delivers another Redemption Notice to the holders of the Series D Preferred Stock in accordance with the provisions of this Section D.3. "Trading Day" shall mean any day on which the Common Stock is traded for any period on NASDAQ, or on the principal securities exchange or other securities market on which the Common Stock is then being traded. If the Corporation elects to redeem some, but not all, of the Series D Preferred Stock, the Corporation shall redeem a pro-rata amount from each holder of Series D Preferred Stock. Holders of Series D Preferred Stock may convert all or any part of their shares of Series D Preferred Stock into Common Stock by delivering a Notice of Conversion (as defined herein) to the Corporation at any time prior to the Effective Date of Redemption (as defined herein).

(e) The "Redemption Price" with respect to each share of Series D Preferred Stock shall mean the amount equal to the sum of (i) the Stated Value thereof plus (ii) the amount equal to eight (8%) percent per annum of such Stated Value for the period beginning on the issuance of such share and ending on the Effective Date of Redemption hereunder.

(f) The Corporation shall effect each redemption under this Section D.3 by giving by least ninety (90) days (subject to extension as set forth below) prior written notice (the "Redemption Notice") to (i) the holders of Series D Preferred Stock selected for redemption at the address and facsimile number of such holder appearing in the Corporation's register for the Series D Preferred Stock and (ii) the Transfer Agent, which Redemption Notice shall be deemed to have been delivered three (3) business days after the Corporation's mailing (by overnight courier, with a copy by facsimile) of such notice. Such Redemption Notice shall indicate the number of shares of the holder's Series D Preferred Stock that have been selected for redemption, the date which such redemption is to become effective (the "Effective Date of Redemption") and the Redemption Price. The Corporation shall not be entitled to send any Redemption Notice and begin the redemption procedure unless it has (i) the full amount of the Redemption Price, in cash, available in a demand or other immediately available account in a bank or similar financial institution or (ii) immediately available credit facilities, in the full amount of the Redemption Price, with a bank or similar financial institution on the date the Redemption Notice is delivered to the applicable holder. Notwithstanding the foregoing, the ninety (90) day notice period referred to herein shall be extended with respect to any holder of Series D Preferred Stock by such number of days after the date of the Redemption Notice as such

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holder is not permitted to sell all of its Series D Preferred Stock pursuant to an effective registration statement filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (or a successor statute) (the "1933 Act") or pursuant to Rule 144(k) under the 1933 Act.

The Redemption Price shall be paid to the holder of the Series D Preferred Stock being redeemed within 10 business days of the Effective Date of Redemption; provided, however, that the Corporation shall not be obligated to deliver any portion of the Redemption Price until either the certificates evidencing the Series D Preferred Stock being redeemed are delivered to the office of the Corporation or the Transfer Agent, or the holder notifies the Corporation or the Transfer Agent that such certificates have been lost, stolen or destroyed and delivers the documentation in accordance with Section D.4(d) hereof. Notwithstanding anything herein to the contrary, in the event that the certificates evidencing the Series D Preferred Stock redeemed are not delivered to the Corporation or the Transfer Agent prior to the 10th business day following the Effective Date of Redemption, the redemption of the Series D Preferred Stock pursuant to this Section D.3 shall still be deemed effective as of the Effective Date of Redemption and the Redemption Price shall be paid to the holder of Series D Preferred Stock redeemed within 5 business days of the date the certificates evidencing the Series D Preferred Stock redeemed are actually delivered to the Corporation or the Transfer Agent.

(g) If of any of the following events (each, a "Mandatory Redemption Event") shall occur:

(i) Conversion and the Shares. The Corporation fails to

issue shares of Common Stock (subject to the limitations set forth in Section D.4(g)) to the holders of Series D Preferred Stock upon exercise by the holders of their conversion rights in accordance with the terms of this Certificate of Designation (for a period of at least sixty (60) days if such failure is solely as a result of the circumstances governed by Section D.4(e) below and the Corporation is using all commercially reasonable efforts to authorize a sufficient number of shares of Common Stock as soon as practicable), fails to transfer any certificate for shares of Common Stock issued to the holders upon conversion of the Series D Preferred Stock and when required by Section D of the Second Restated Certificate of Incorporation or the Registration Rights Agreement, dated as of May 15, 1996, by and among the Corporation and the other signatories thereto (the "Registration Rights Agreement") (or shares of Common Stock issuable upon exercise of the warrants (the "Warrants") issued pursuant to the Securities Purchase Agreement, dated as of May 15, 1996, by and between the Corporation and the other signatory thereto (the "Purchase Agreement") in accordance with the Warrants), or fails to remove any restrictive legend on any certificate or any shares of Common Stock issued to the holders of Series D Preferred Stock upon conversion of the Series D Preferred Stock as and when required by this Second Restated Certificate of Incorporation, the Purchase Agreement or the Registration Rights Agreement (or shares of Common Stock issuable upon exercise of the Warrants in accordance with the Warrants) and any such failure shall continue uncured for twenty (20) business days after the Corporation shall have been notified thereof in writing by the holder;

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(ii) Failure to Register. The Corporation fails to obtain

effectiveness with the Securities and Exchange Commission (the "SEC") of the Registration Statement (as defined in the Registration Rights Agreement) prior to November 15, 1996 (other than because of issues raised by the SEC arising from the transactions contemplated by the Purchase Agreement or because of a change in the policy, procedures, interpretations, positions, practice or rules of the SEC made public after the date hereof so long as, in either case, the Corporation is using all commercially reasonable efforts to achieve the effectiveness of such Registration Statement) or lapses in effect (or sales otherwise cannot be made thereunder) for more than thirty (30) consecutive days or sixty (60) days in any twelve (12) month period after such Registration Statement becomes effective;

(iii) Receiver or Trustee. The Corporation or any subsidiary of the

Corporation shall make an assignment for the benefit of creditors, or apply for or consent to the appointment of a receiver or trustee for it or for all or substantially all of its property or business; or such a receiver or trustee shall otherwise be appointed;

(iv) Bankruptcy. Bankruptcy, insolvency, reorganization or

liquidation proceedings or other proceedings for relief under any bankruptcy law or any law for the relief of debtors shall be instituted by or against the Corporation or any subsidiary of the Corporation.

Then, upon the occurrence and during the continuation of any Mandatory Redemption Event specified in subparagraphs (i) or (ii), at the option of the holders of at least 50% of the then outstanding shares of Series D Preferred Stock by written notice (the "Mandatory Redemption Notice") to the Corporation of such Mandatory Redemption Event, the Corporation shall, and upon the occurrence of any Mandatory Redemption Event specified in subparagraphs (iii) or (iv), purchase the holder's shares of Series D Preferred Stock for an amount per share equal to 125% multiplied by the Redemption Price in effect at the time of the redemption hereunder.

Subject to the limitations contained in Section D.4(g), if the Corporation fails to pay the Mandatory Redemption Amount for each share within five (5) business days of written notice that such amount is due and payable, then each holder of Series D Preferred Stock shall have the right at any time, so long as the Mandatory Redemption Event continues to require the Corporation, upon written notice, to immediately issue (in accordance with the terms of Section D.4 below), in lieu of the Mandatory Redemption Amount, with respect to each outstanding share of Series D Preferred Stock held by such holder, the number of shares of Common Stock of the Corporation equal to the Mandatory Redemption Amount divided by the Conversion Price then in effect.

4. Conversion at the Option of the Holder.

(a) Each holder of shares of Series D Preferred Stock may, at its option at any time and from time to time (whether or not the Corporation has sent an Optional Conversion Notice to the holders of Series D Preferred Stock pursuant to Section D.3), upon surrender of the certificates therefor, convert any or all of its shares of Series D Preferred Stock into Common Stock as follows (an "Optional Conversion"). Each share of Series D Preferred

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Stock shall be convertible into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing (x) the sum of (I) the Stated Value thereof, plus (II) unless the Corporation has timely redeemed such Premium in cash in accordance with Section D.3, an amount equal to eight percent (8%) per annum of such Stated Value for the period beginning on the date of issuance of such share and ending on the Conversion Date (the "Premium"), by (y) the then effective Conversion Price (as defined below); provided, however, that in no event shall holders of shares of Series D Preferred Stock be entitled to convert any such shares in excess of that number of shares upon conversion of which the sum of (x) the number of shares of Common Stock beneficially owned by the holder and its affiliates (other than shares of Common Stock which may be deemed beneficially owned through the ownership of the unconverted portion of the shares of Series D Preferred Stock and the unexercised portion of the Warrants) and (y) the number of shares of Common Stock issuable upon the conversion of the shares of Series D Preferred Stock with respect to which the determination of this proviso is being made would result in beneficial ownership by the holder and its affiliates of more than 4.9% of the outstanding shares of Common Stock. For purposes of the second proviso to the immediately preceding sentence, beneficial ownership shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and Regulation 13 D-G thereunder, except as otherwise provided in clause (x) of such proviso.

(b) The "Conversion Price" shall be the lesser of (i) the Applicable Percentage (as hereinafter defined) of the average of the closing bid prices for the Common Stock on the NASDAQ National Market ("NASDAQ"), or on the principal securities exchange or other securities market on which the Common Stock is then being traded, for the five (5) consecutive Trading Days (as defined below) ending one Trading Day prior to the date (the "Conversion Date") the Conversion Notice is sent by a holder to the Corporation via facsimile (the "Variable Conversion Price"), and (ii) the average of the closing bid prices for the Common Stock on NASDAQ for the five (5) consecutive Trading Days ending on the Closing Date under the Purchase Agreement (the "Closing Date") (the "Fixed Conversion Price") (subject to equitable adjustments from time to time pursuant to the antidilution provisions of Section D.4(c) below). Applicable Percentage means (i) 100%, if the Conversion Date is within forty (40) days after the Closing Date, and (ii) 90%, if the Conversion Date is within eighty (80) days,

but more than forty (40) days, after the Closing Date, and (iii) 75%, if the Conversion Date is more than eighty (80) days after the Closing Date.

(c) The Conversion Price shall be subject to adjustment from time to time as follows:

(i) Adjustment to Fixed Conversion Price Due to Stock Split,

Stock Dividend, Etc. If at any time when the Series D Preferred Stock is

issued and outstanding, the number of outstanding shares of Common Stock is increased by a stock split, stock dividend, or other similar event, the Fixed Conversion Price shall be proportionately reduced, or if the number of outstanding shares of Common Stock is decreased by a reverse stock split, combination or reclassification of shares, or other similar event, the Fixed Conversion Price shall be proportionately increased. In such event the Corporation shall notify the Transfer Agent of such change on or before the effective date thereof.

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(ii) Adjustment to Variable Conversion Price. If at any time

when Series D Preferred Stock is issued and outstanding, the number of outstanding shares of Common Stock is increased or decreased by a stock split, stock dividend, combination, reclassification or other similar event, which event shall have taken place during the reference period for determination of the Conversion Price for any Optional Conversion or Mandatory Conversion of the Series D Preferred Stock, then the Variable Conversion Price shall be calculated giving appropriate effect to the stock split, stock dividend, combination, reclassification or other similar event for all five (5) Trading Days immediately preceding the Conversion Date.

(iii) Adjustment Due to Merger, Consolidation, Etc. If, at

any time when Series D Preferred Stock is issued and outstanding and prior to the conversion of all Series D Preferred Stock, there shall be (i) any reclassification or change of the outstanding shares of Common Stock (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination), (ii) any consolidation or merger of the Corporation with any other corporation (other than a merger in which the Corporation is the surviving or continuing corporation and its capital stock is unchanged), (iii) any sale or transfer of all or substantially all of the assets of the Corporation or (iv) any share exchange pursuant to which all of the outstanding shares of Common Stock are converted into other securities or property, then the holders of Series D Preferred Stock shall, upon being given at least thirty (30) days prior written notice of such transaction, thereafter have the right to purchase and receive upon conversion of Series D Preferred Stock, upon the basis and upon the terms and conditions specified herein and in lieu of the shares of Common Stock immediately theretofore issuable upon conversion, such shares of stock and/or securities or other property as may be issued or payable with respect to or in exchange for the number of shares of Common Stock immediately theretofore purchasable and receivable upon the conversion of Series D Preferred Stock held by such holders had such merger, consolidation, exchange of shares, recapitalization, reorganization or other similar event not taken place and in any such case appropriate provisions shall be made with respect to the rights and interests of the holders of the Series D Preferred Stock to the end that the provisions hereof (including, without limitation, provisions for adjustment of the Conversion Price and of the number of shares issuable upon conversion of the Series D Preferred Stock) shall thereafter be applicable, as nearly as may be practicable in relation to any shares of stock or securities thereafter deliverable upon the conversion thereof. The Corporation shall not effect any transaction described in this subsection (c) unless (i) each holder of Series D Preferred Stock has received written notice of such transaction at least thirty (30) days prior thereto and in no event later than ten (10) days prior to the record date for the determination of shareholders entitled to vote with respect thereto, and (ii) the provisions of this paragraph have been complied with. The above provisions shall similarly apply to successive reclassifications, consolidations, mergers, sales, transfers or share exchanges.

(iv) No Fractional Shares. If any adjustment under this

Section D.4(c) would create a fractional share of Common Stock or a right to acquire a fractional share of Common Stock, such fractional share shall be disregarded and the number of shares of Common Stock issuable upon conversion shall be the next higher number of shares.

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(d) In order to convert Series D Preferred Stock into full shares of Common Stock, a holder shall: (i) fax a copy of the fully executed notice of conversion in the form attached hereto as Exhibit A ("Notice of Conversion") to

the Corporation at the office of the Corporation for the Series D Preferred Stock that the holder elects to convert the same, which notice shall specify the number of shares of Series D Preferred Stock to be converted, the applicable Conversion Price and a calculation of the number of shares of Common Stock issuable upon such conversion (together with a copy of the first page of each certificate to be converted) prior to Midnight, New York City time (the "Conversion Notice Deadline") on the date of conversion specified on the Notice of Conversion; and (ii) surrender the original certificates representing the Series D Preferred Stock being converted (the "Preferred Stock Certificates"), duly endorsed, along with a copy of the Notice of Conversion as soon as practicable thereafter to the office of the Corporation for the Series D Preferred Stock; provided, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such conversion unless either the Preferred Stock Certificates are delivered to the Corporation as provided above, or the holder notifies the Corporation that such certificates have been lost, stolen or destroyed (subject to the requirements of subparagraph (i) below). In the case of a dispute as to the calculation of the Conversion Price, the Corporation shall promptly issue such number of shares of Common Stock that are not disputed in accordance with subparagraph (ii) below. The Corporation shall submit the disputed calculations to its outside accountant via facsimile within three (3) business days of receipt of the Notice of Conversion. The accountant shall audit the calculations and notify the Corporation and the holder of the results no later than 48 hours from the time it receives the disputed calculations. The accountant's calculation shall be deemed conclusive absent manifest error.

(i) Lost or Stolen Certificates. Upon receipt by the

Corporation of evidence of the loss, theft, destruction or mutilation of any Preferred Stock Certificates representing shares of Series D Preferred Stock, and (in the case of loss, theft or destruction) of indemnity or security reasonably satisfactory to the Corporation, and upon surrender and cancellation of the Preferred Stock Certificate(s), if mutilated, the Corporation shall execute and deliver new Preferred Stock Certificate(s) of like tenor and date. However, the Corporation shall not be obligated to reissue such lost or stolen Preferred Stock Certificate(s) if the holder contemporaneously requests the Corporation to convert such Series D Preferred Stock.

(ii) Delivery of Common Stock Upon Conversion. Upon the

surrender of certificates as described above from a holder of Series D Preferred Stock accompanied by a Notice of Conversion, the Corporation shall issue and, within two (2) business days (the "Delivery Period") after such surrender (or, in the case of lost, stolen or destroyed certificates, after provision of agreement and indemnification pursuant to subparagraph (i) above), deliver to or upon the order of the holder (i) that number of shares of Common Stock for the portion of the shares of Series D Preferred Stock converted as shall be determined in accordance herewith and (ii) a certificate representing the balance of the shares of Series D Preferred Stock not converted, if any. In addition to any other remedies available to the holder, including actual damages and/or equitable relief, the Corporation shall pay to a holder \$250 in cash for the first day beyond such Delivery Period that the Corporation fails to deliver Common Stock issuable upon surrender of shares of Series D Preferred Stock with a Notice of Conversion

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and \$500 per day in cash for each day thereafter until such time as the earlier of the date that the Corporation has delivered all such Common Stock and the tenth day beyond such Delivery Period. Such cash amount shall be paid to such holder by the fifth day of the month following the month in which it has accrued. In the event the Corporation fails to deliver such Common Stock prior

to the expiration of the ten (10) business day period after the Delivery Period for any reason (whether due to a requirement of law or a stock exchange or otherwise), such holder shall be entitled to (in addition to any other remedies available to the holder) Conversion Default Payments in accordance with Section D.4(e) hereof beginning on the expiration of such ten (10) business day period.

(iii) No Fractional Shares. If any conversion of Series D

Preferred Stock would result in a fractional share of Common Stock or the right to acquire a fractional share of Common Stock, such fractional share shall be disregarded and the number of shares of Common Stock issuable upon conversion of the Series D Preferred Stock shall be the next higher number of shares.

(iv) Conversion Date. The "Conversion Date" shall be the

date specified in the Notice of Conversion, provided (i) that the advance copy of the Notice of Conversion is faxed to the Corporation before Midnight, New York City time, on the Conversion Date, and (ii) that the original Preferred Stock Certificate(s), duly endorsed, are surrendered along with a copy of the Notice of Conversion as soon as practicable thereafter to the office of the Corporation or the Transfer Agent for the Series D Preferred Stock. The person or persons entitled to receive the shares of Common Stock issuable upon conversion shall be treated for all purposes as the record holder or holders of such securities as of the Conversion Date and all rights with respect to the shares of Series D Preferred Stock surrendered shall forthwith terminate except the right to receive the shares of Common Stock or other securities or property issuable on such conversion.

(e) A number of shares of the authorized but unissued Common Stock sufficient to provide for the conversion of the Series D Preferred Stock outstanding at the then current Conversion Price shall at all times be reserved by the Corporation, free from preemptive rights, for such conversion or exercise. If the Corporation shall issue any securities or make any change in its capital structure which would change the number of shares of Common Stock into which each share of the Series D Preferred Stock shall be convertible at the then current Conversion Price, the Corporation shall at the same time also make proper provision so that thereafter there shall be a sufficient number of shares of Common Stock authorized and reserved, free from preemptive rights, for conversion of the outstanding Series D Preferred Stock on the new basis. If, at any time a holder of shares of Series D Preferred Stock submits a Conversion Notice, the Corporation does not have sufficient authorized but unissued shares of Common Stock available to effect such conversion in accordance with the provisions of this Section 4 (a "Conversion Default"), the Corporation shall issue to the holder all of the shares of Common Stock which are available to effect such conversion (including, with the Holder's written consent, any shares underlying outstanding Warrants ("Borrowed Shares")). The number of shares of Series D Preferred Stock included in the Notice of Conversion which exceeds the amount which is then convertible into available shares of Common Stock (including Borrowed

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Shares, if any) (the "Excess Amount") shall, notwithstanding anything to the contrary contained herein, not be convertible into Common Stock in accordance with the terms hereof until (and at the holder's option at any time after) the date additional shares of Common Stock are authorized by the Corporation to permit such conversion, at which time the Conversion Price in respect thereof shall be the lesser of (i) the Conversion Price on the Conversion Date Default (as defined below) and (ii) the Conversion Price on the Conversion Date elected by the holder in respect thereof. The Corporation shall pay to the holder payments ("Conversion Default Payments") for a Conversion Default in the amount of $(N/365)$, multiplied by the sum of the Stated Value with respect to each share of Series D Preferred Stock, multiplied by the Default Amount (as defined below) on the first day of the Conversion Default (the "Conversion Default Date"), multiplied by .25, where (i) N = the number of days from the Conversion Default Date to the earlier of (A) the date (the "Authorization Date") that the Corporation authorizes a sufficient number of shares of Common Stock to effect conversion of the full number of shares of Series D Preferred Stock and (B) the date such share of Series D Preferred Stock is redeemed in accordance with Section D.4(d) and (ii) "Default Amount" means the Excess Amount plus the number of shares of Series D Preferred Stock that would not be convertible as a result of this Section D.4(e) but for the Borrowed Shares. The Corporation shall send notice to the holder of the authorization of additional shares of Common Stock,

the Authorization Date and the amount of holder's accrued Conversion Default Payments. The accrued Conversion Default Payments for each calendar month shall be paid in cash or, subject to the limitations contained in Section D.4(g), shall be convertible into Common Stock at the Conversion Price, at the holder's option, as follows:

(i) In the event holder elects to take such payment in cash, cash payment shall be made to holder by the fifth day of the month following the month in which it has accrued; and

(ii) In the event holder elects to take such payment in Common Stock, the holder may convert such payment amount into Common Stock at the Conversion Price (as in effect at the time of Conversion) at any time after the fifth day of the month following the month in which it has accrued in accordance with the terms of this Section 4.

1. Nothing herein shall limit the holder's right to pursue actual damages for the Corporation's failure to maintain a sufficient number of authorized shares of Common Stock, and each holder shall have the right to pursue all remedies available at law or in equity (including a decree of specific performance and/or injunctive relief).

(f) Upon the occurrence of each adjustment or readjustment of the Conversion Price pursuant to this Section 4, the Corporation, at its expense, shall promptly compute such adjustment or readjustment in accordance with the terms hereof and prepare and furnish to each holder of Series D Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, upon the written request at any time of any holder of Series D Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (i) such adjustment or readjustment, (ii) the Conversion Price at the time in effect and (iii) the

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number of shares of Common Stock and the amount, if any, of other securities or property which at the time would be received upon conversion of a share of Series D Preferred Stock.

(g) Notwithstanding anything contained herein to the contrary, in no event shall the aggregate number of shares of Common Stock issuable upon conversion or redemption of, or otherwise issuable with respect to, all of the Series D Preferred Stock issued by the Corporation pursuant to the Purchase Agreement (including, without limitation, all shares of Common Stock issued with respect to such Series D Preferred Stock pursuant to Section D.3 and Section D.4(e) hereof, but without taking into account any shares of Common Stock issuable upon exercise of Warrants) plus all shares of Common Stock issuable pursuant to Section 2(c) of the Registration Rights Agreement exceed 2,424,884 (subject to equitable adjustments from time to time pursuant to the antidilution provisions of Section D.4(c) above). In the event the Corporation is prohibited from issuing shares of Common Stock as a result of the operation of this Section D.4(g), the provisions of Section 3, subparagraph (ii) of Section D.4(d) and Section D.4(e) shall apply to the extent applicable.

5. Mandatory Conversion.

Each share of Series D Preferred Stock issued and outstanding on May 15, 2001, automatically shall be converted into shares of Common Stock on such date at the then effective Conversion Price in accordance with the provisions of Section D.4 hereof (the "Mandatory Conversion").

6. Voting Rights.

The holders of the Series D Preferred Stock have no voting power whatsoever, except as otherwise provided by the Delaware General Corporation Law ("DGCL"), and in this Section D.6, and in Section D.7 below.

Notwithstanding the above, the Corporation shall provide each holder of Series D Preferred Stock with prior notification of any meeting of the shareholders (and copies of proxy materials and other information sent to shareholders). In the event of any taking by the Corporation of a record of its

shareholders for the purpose of determining shareholders who are entitled to receive payment of any dividend or other distribution, any right to subscribe for, purchase or otherwise acquire (including by way of merger, consolidation or recapitalization) any share of any class or any other securities or property, or to receive any other right, or for the purpose of determining shareholders who are entitled to vote in connection with any proposed sale, lease or conveyance of all or substantially all of the assets of the Corporation, or any proposed liquidation, dissolution or winding up of the Corporation, the Corporation shall mail a notice to each holder, at least ten (10) days prior to the record date specified therein (or 30 days prior to the consummation of the transaction or event, whichever is earlier), of the date on which any such record is to be taken for the purpose of such dividend, distribution, right or other event, and a brief statement regarding the amount and character of such dividend, distribution, right or other event to the extent known at such time.

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To the extent that under the DGCL the vote of the holders of the Series D Preferred Stock, voting separately as a class or series as applicable, is required to authorize a given action of the Corporation, the affirmative vote or consent of the holders of at least a majority of the shares of the Series D Preferred Stock represented at a duly held meeting at which a quorum is present or by written consent of a majority of the shares of Series D Preferred Stock (except as otherwise may be required under the DGCL) shall constitute the approval of such action by the class. To the extent that under the DGCL holders of the Series D Preferred Stock are entitled to vote on a matter with holders of Common Stock, voting together as one class, each share of Series D Preferred Stock shall be entitled to a number of votes equal to the number of shares of Common Stock into which it is then convertible using the record date for the taking of such vote of shareholders as the date as of which the Conversion Price is calculated. Holders of the Series D Preferred Stock shall be entitled to notice of (and copies of proxy materials and other information sent to shareholders) all shareholder meetings or written consents with respect to which they would be entitled to vote, which notice would be provided pursuant to the Corporation's by-laws and the DGCL.

7. Protection Provision.

So long as shares of Series D Preferred Stock are outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent, as provided by the DGCL) of the holders of at least a majority of the then outstanding shares of Series D Preferred Stock:

- (a) alter or change the rights, preferences or privileges of the Series D Preferred Stock or any other class or series of capital stock of the Corporation so as to affect adversely the Series D Preferred Stock;
- (b) create any new class or series of capital stock having a preference over the Series D Preferred Stock as to distribution of assets upon liquidation, dissolution or winding up of the Corporation ("Senior Securities");
- (c) create any new class or series of capital stock ranking pari passu with the Series D Preferred Stock as to distribution of assets upon liquidation, dissolution or winding up of the Corporation (as previously defined in Section D.1 hereof, "Pari Passu Securities");
- (d) increase the authorized number of shares of Series D Preferred Stock.
- (e) do any act or thing not authorized or contemplated by this Certificate of Designation which would result in taxation of the holders of shares of the Series D Preferred Stock under Section 305 of the Internal Revenue Code of 1986, as amended (or any comparable provision of the Internal Revenue Code as hereafter from time to time amended); or
- (f) issue after the Closing Date any Senior Securities or Pari Passu Securities (other than Common Stock).

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In the event holders of at least a majority of the then outstanding shares of Series D Preferred Stock agree to allow the Corporation to alter or change

the rights, preferences or privileges of the shares of Series D Preferred Stock, pursuant to subsection (a) above, so as to affect the Series D Preferred Stock, then the Corporation will deliver notice of such approved change to the holders of the Series D Preferred Stock that did not agree to such alteration or change (the "Dissenting Holders") and Dissenting Holders shall have the right for a period of twenty (20) days to convert pursuant to the terms of this Section D of the Second Restated Certificate of Incorporation of the Corporation as they exist prior to such alteration or change or continue to hold their shares of Series D Preferred Stock.

8. Notices.

Each holders of Series D Preferred Stock shall send a copy of all notices to be given to the Corporation under this Section D of the Second Restated Certificate of Incorporation to such one (1) counsel as the Corporation may designate in writing at least five (5) business days prior to such holder sending such notice. For purposes of this Section D.8, the initial counsel designated by the Corporation for receiving copies of notices under this Section D of the Second Restated Certificate of Incorporation shall be Jackson Tufts Cole & Black, LLP, 60 South Market Street, San Jose, California 95113, Attention: Richard Scudellari, Telecopier (408) 998-4889.

FIFTH: In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to adopt, alter or repeal the by-laws of the Company, subject always to the right of the stockholders entitled to vote with respect thereto to adopt additional by-laws and to alter or repeal by-laws adopted by the Board of Directors, and to provide in connection therewith that any by-law adopted or altered by the stockholders may be altered or repealed only by a vote of a designated proportion of the stockholders.

SIXTH:

(A) If with respect to any of the following transactions, a stockholder vote is required by law or by any other rules or policies to which the Company may then be subject, the affirmative vote of two-thirds of the outstanding stock entitled to vote thereon, given in person or by proxy, at a meeting called for the purpose shall be necessary.

(a) To approve (i) the lease, sale, exchange, transfer or other disposition by the Company of all or substantially all, of its assets or business to a related company, or an affiliate of a related company, or (ii) the consolidation of the Company with or its merger into a related company or an affiliate of a related company, or (iii) the merger into the Company or a subsidiary of the Company of a related company or an affiliate of a related company, or (iv) an acquisition of substantially all of the assets of a corporation or of the securities representing such assets, in which the Company, or any subsidiary of the Company, is the acquiring corporation and voting shares of the Company are issued or transferred to a related company or an affiliate of a related company, or to stockholders of a related company, or an affiliate of a related company, or an associated person.

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(b) To approve any agreement, contract, or other arrangement with a related company or an affiliate of a related company, or an associated person providing for any of the transactions described in subparagraph (a) above; or

(c) To effect any amendment of the Certificate of Incorporation which changes the provisions of this Article Sixth:

1. For the purpose of this Article Sixth, (i) a "related company" in respect of a given transaction, shall be any person, partnership, corporation, or firm (except a subsidiary of the Company at least a majority of whose stock is owned by the Company) which, together with its affiliates and associated persons owns of record or beneficially, directly or indirectly, in excess of 10% of the outstanding shares of the Company, entitled to vote upon such transaction, as of the record date used to determine the stockholders of the Company entitled to vote upon such transaction; (ii) an "affiliate" of a related company shall be any

individual, joint venture, trust, partnership, or corporation which, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, the related company; and (iii) an "associated person" of a related company shall be any officer or director or any beneficial owner, directly or indirectly, of 10% or more of any class of equity security of such related company or any of its affiliates.

The determination of the Board of Directors of the Company, based on information known to the Board of Directors and made in good faith, shall be conclusive as to whether any person, partnership, corporation or firm is a related company or affiliate or associated person as defined in this Article Sixth.

(B) If the provisions of this Article Sixth are applicable to a transaction and if the provisions of Section 262 of the Delaware General Corporation Law, or any similar provision hereinafter enacted, would be applicable thereto but for the provisions of subparagraph (k) thereof, then the stockholders of the Company shall be entitled to the rights granted by Section 262 of the Delaware General Corporation Law or any similar provision hereafter enacted notwithstanding the exemptions contained in subparagraph (k) of such section.

(C) If the provisions of this Article Sixth are applicable to a transaction, but the provisions of Section 262 of the Delaware General Corporation Law are not applicable thereto, notwithstanding the elimination of the exemptions contained in subparagraph (k) of such Section, then a holder of dissenting shares with respect to such transaction shall be entitled to receive from the Company, payment for the value of his stock on the effective date of the transaction, excluding any appreciation or depreciation in value from the expectation or accomplishment of the transaction.

(a) To qualify as a holder of dissenting shares, a stockholder shall, before the taking of the vote on the transaction, file with the Company a written objection to such proposed transaction. Following the effective date of such transaction, the Company shall notify each stockholder who has filed such written objection and whose shares were not voted in favor of the transaction, that the transaction has become

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effective. The notice shall be sent by registered or certified mail, return receipt requested, addressed to the stockholder at his address as it appears on the records of the Company. Such stockholder shall, within 20 days after the mailing of the notice, demand, in writing, from the Company, payment of the value of his stock. The demand shall state the number and class of shares held of record by the stockholder which he demands that the Company purchase and shall contain a request that the Company state what it claims to be the fair market value of these shares. In addition, within 20 days after the date of mailing of such notice, such stockholder shall submit to the Company at its principal office or at the office of any transfer agent thereof, his certificate representing the shares which he demands that the Company purchase to be stamped or endorsed with a statement that the shares are dissenting shares or to be exchanged for a certificate of appropriate denomination to be so stamped or endorsed. Upon subsequent transfers of such dissenting shares on the books of the Company, the new certificates issued therefor shall bear a like statement, together with the name of the original dissenting holder of the shares.

(b) As used in this paragraph (C) "dissenting shares" means shares which come within all the following descriptions:

1. Which were held of record on the date for the determination of stockholders entitled to vote at the meeting at which the transaction was approved and the holder thereof filed written objection thereto with the Company before the taking of the vote thereon and did not vote in favor thereof.

2. Which the holder has demanded that the Company purchase at their fair market value in accordance with subparagraph (a) above.

3. Which the holder has submitted for endorsement in

accordance with subparagraph (a) above.

(c) Within five days after receipt of a copy of a demand for purchase of shares as dissenting shares, the Company shall, by registered or certified mail, return receipt requested, addressed to the stockholder at his address as it appears on the records of the Company, mail a written offer to purchase the shares if they are determined to be dissenting shares, at a price deemed by the Company to represent their fair market value.

(d) Payment of the fair market value of the dissenting shares shall be made within 30 days after the amount thereof has been agreed upon, upon surrender of the certificates therefor unless provided otherwise by agreement.

(e) If the Company shall deny that the shares are dissenting shares, or the Company shall fail to make an offer for the shares, or the Company and the stockholder fail to agree upon the fair market value of the shares, the Company or any stockholder demanding purchase of his shares as dissenting shares, within four months after the date upon which the Company mailed notice that the transaction was effective, but not thereafter, may make written demand to the American Arbitration Association,

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Los Angeles, California, for a determination of the value of the dissenting shares or of whether the shares are dissenting shares, or both, in accordance with the Commercial Arbitration Rules of such Association, which arbitration shall be conducted in Los Angeles, California. If such arbitration is commenced by the Company, there shall be named therein all stockholders who have theretofore qualified as dissenting stockholders. If such arbitration is commenced by any one or more of such stockholders, the Company shall be permitted to join therein all stockholders who have theretofore qualified as dissenting stockholders. The arbitration shall be conducted before a panel of three arbitrators selected in accordance with the Commercial Arbitration Rules of the American Arbitration Association, and such panel of arbitrators shall determine those stockholders who have complied with the provisions of this Paragraph (C), and who have become entitled to the valuation of any payment for their shares and the value of such dissenting shares. Each stockholder who is a party to such arbitration, and the Company, shall be afforded reasonable opportunity to submit pertinent evidence on the value of the shares. Upon the determination of the value of the stock and of the stockholders entitled to payment therefor by the panel of arbitrators, such panel of arbitrators shall direct the payment of such value to the stockholders entitled thereto by the Company upon transfer to it of the certificates representing such stock, which determination may be enforced by a court of competent jurisdiction in the State of New York.

(f) The costs of the arbitration shall be assessed or apportioned as the panel of arbitrators considers equitable.

(g) All action required or permitted to be taken by the panel of arbitrators shall be taken by the majority decision of the members of the panel of arbitrators.

(h) Except as expressly limited in this Paragraph (C), holders of dissenting shares continue to have all the rights and privileges incident to those shares until the fair market value of their shares is agreed upon or determined. A holder of dissenting shares may not withdraw his dissent or demand for payment unless the Company, by its Board of Directors, consents thereto.

(i) Dissenting shares lose their status as dissenting shares, and the holders thereof cease to be entitled to require the Company to purchase their shares upon the happening of any of the following

1. The Company abandons the transaction which the dissenting stockholder did not approve.

2. The shares are surrendered for conversion into shares of another class in accordance with the Certificate of Incorporation, or transferred prior to their submission for endorsement in accordance with

subparagraph (a) above.

3. The holder of the dissenting shares and the Company do not agree upon the status of the shares as dissenting shares and upon the purchase price of the

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shares, and the holder of the dissenting shares does not file a written demand for arbitration or intervene in an arbitration or is not made a party to an arbitration in respect to dissenting shares within four months after the date on which the notice of the effective date of the transaction is mailed to the stockholders.

(j) If litigation is instituted to test the sufficiency or regularity of the votes of the stockholders in authorizing a transaction, the proceeding for compensation of any holder of dissenting shares shall be suspended until final determination of such litigation.

SEVENTH: The Company shall indemnify any and all persons whom it has the power to indemnify pursuant to the General Corporation Law of Delaware against any and all expenses, judgments, fines, amounts paid in settlement, and any other liabilities to the fullest extent permitted by such law and may at the discretion of the Board of Directors, purchase and maintain insurance, at its expense, to protect itself and such persons against any expense, judgment, fine, amount paid in settlement or other liability, whether or not the Company would have the power to so indemnify such person under the General Corporation Law of Delaware.

EIGHTH: A director of the Company shall not be personally liable to the Company or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Company or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law or (iv) for any transaction from which the director derived an improper personal benefit. If the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Company shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended. Any repeal or modification of this Article by the stockholders of the Company shall not adversely affect any right or protection of a director of the Company existing at the time of such repeal or modification.

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IN WITNESS WHEREOF, OXIS INTERNATIONAL ,INC., a Delaware corporation has caused this Second Restated Certificate of Incorporation to be signed by its Chairman of the Board and attested by its Secretary, this 26th day of August, 1996.

OXIS INTERNATIONAL, INC., a
Delaware corporation

/s/ Ray R. Rogers

Ray R. Rogers,
Chairman of the Board

ATTEST:

By: /s/ Jon S. Pitcher

Jon S. Pitcher,
Secretary

EXHIBIT A

NOTICE OF CONVERSION

(To be executed by the Registered Holder
in order to Convert the Series D Preferred Stock)

The undersigned hereby irrevocably elects to convert shares of Series D Preferred Stock, represented by stock certificate No.(s). (the "Preferred Stock Certificates") into shares of common stock ("Common Stock") of OXIS International, Inc. (the "Corporation") according to the conditions of the Corporation's Certificate of Incorporation with respect to Series D Preferred Stock, as of the date written below. If securities are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto and is delivering herewith such certificates. No fee will be charged to the Holder for any conversion, except for transfer taxes, if any. A copy of each Preferred Stock Certificate is attached hereto (or evidence of loss, theft or destruction thereof).

The undersigned represents and warrants that all offers and sales by the undersigned of the securities issuable to the undersigned upon conversion of Series D Preferred Stock shall be made pursuant to registration of the securities under the Securities Act of 1933, as amended (the "Act"), or pursuant to an exemption from registration under the Act.

Date of Conversion: _____

Applicable Conversion Price: _____

Number of Shares of
Common Stock to be Issued: _____

Signature: _____

Name: _____

Address: _____

* The Corporation is not required to issue shares of Common Stock until the original Series D Preferred Stock Certificate(s) (or evidence of loss, theft or destruction thereof) to be converted are received by the Corporation or its Transfer Agent. the Corporation shall issue and deliver

Exhibit A - Page 1

shares of Common Stock to an overnight courier not later than two (2) business days following receipt of the original Preferred Stock Certificate(s) to be converted, and shall make payments pursuant to the Certificate of Incorporation for the number of business days such issuance and delivery is late.

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EXHIBIT 3(a)

CERTIFICATE OF AMENDMENT
OF
SECOND RESTATED CERTIFICATE OF INCORPORATION
OF
OXIS INTERNATIONAL, INC.

under and by virtue of the General Corporation Law of the State of Delaware,
DOES HEREBY CERTIFY:

FIRST: That the Board of Directors of said corporation, at duly called meeting of the directors, adopted a resolution proposing and declaring advisable the following amendment to the Restated Certificate of Incorporation of said corporation:

RESOLVED, that the Second Restated Certificate of Incorporation of the Company be amended by amending the first paragraph of Article Fourth of the Second Restated Certificate of Incorporation of the Company to read in its entirety as follows:

"FOURTH:

I. COMMON STOCK.

The Company is authorized to issue a total of Fifty Million (50,000,000) shares of Common Stock, each of which shares of Common Stock has a par value of Fifty Cents (\$0.50). Dividends may be paid on the Common Stock as and when declared by the Board of Directors, out of any funds of the Company legally available for the payment of such dividends, and each share of Common Stock will be entitled to one vote on all matters on which such stock is entitled to vote. All duly authorized One Dollar (\$1.00) par value shares outstanding shall be deemed shares having a par value of Fifty Cents (\$0.50).

SECOND: That thereafter, pursuant to resolution of its Board of Directors, a meeting of the stockholders of said corporation was held in accordance with Section 222 of the General Corporation Law of the State of Delaware, at which meeting the necessary number of shares required by statute were voted in favor of the amendment.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 of the General Corporation Law of the State of Delaware.

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IN WITNESS WHEREOF, OXIS INTERNATIONAL, INC., a Delaware corporation, has caused this Certificate to be signed by its Chairman of the Board and attested by its Secretary, this _____ day of July, 1997.

OXIS INTERNATIONAL, INC.,
a Delaware corporation

By: /s/ Ray R. Rogers

Ray R. Rogers,
Chairman of the Board

ATTEST:

By: /s/ Jon S. Pitcher

Jon S. Pitcher,
Secretary

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EXHIBIT 3(a)

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION

OF
OXIS INTERNATIONAL, INC.
(A DELAWARE CORPORATION)

OXIS International, Inc. (the "Corporation"), a corporation organized and existing under the Delaware General Corporation Law (the "DGCL"), DOES HEREBY CERTIFY:

FIRST: That the Board of Directors and Stockholders of the Corporation have duly adopted resolutions proposing and declaring advisable the following amendment to the Corporation's Certificate of Incorporation:

The first paragraph of Article FOURTH shall be amended to read in full as follows:

FOURTH:

I. COMMON STOCK

The Company is authorized to issue a total of Ninety-Five million (95,000,000) shares of Common Stock, each of which shares of Common Stock has a par value of one-tenth of one cent (\$.001). Dividends may be paid on the Common Stock as and when declared by the Board of Directors, out of any funds of the Company legally available for the payment of such dividends, and each share of Common Stock will be entitled to one vote on all matters on which such stock is entitled to vote. All duly authorized Fifty Cent (\$.50) par value shares outstanding shall be deemed shares having a par value of one-tenth of one cent (\$.001).

SECOND: That said amendment has been duly adopted in accordance with the requirements of Section 242 of the DGCL.

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed on this 13th day of July, 1998 by Ray R. Rogers, its authorized officer, who acknowledges under penalty of perjury that said amendment is the act and deed of the Corporation and that the facts stated herein are true and correct.

OXIS INTERNATIONAL, INC.

By: /s/ Ray R. Rogers

Name: Ray R. Rogers
Title: Chief Executive Officer

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CERTIFICATE OF AMENDMENT
OF
RESTATED
CERTIFICATE OF INCORPORATION
OF
OXIS INTERNATIONAL, INC.
(a Delaware Corporation)

OXIS International, Inc. (the "Corporation"), a corporation organized and existing under the Delaware General Corporation Law (the "DGCL"), DOES HEREBY CERTIFY:

FIRST: That the Board of Directors and Stockholders of the Corporation have duly adopted resolutions proposing and declaring advisable the following amendment to the Corporation's Restated Certificate of Incorporation:

The first paragraph of Article FOURTH shall be amended by appending the following to the existing text:

Simultaneously with the effective date of this amendment (the "Effective Date"), each share of Common Stock issued and outstanding immediately prior to the Effective Date (the "Old Common Stock") shall automatically and without any action on the part of the holder thereof be reclassified as and changed into one-fifth (1/5) share of New Common Stock (the "New Common Stock"), subject to the treatment of fractional share interests as described below. Such reclassification and change of Old Common Stock into New Common Stock shall not change the par value per share of the shares reclassified and changed. Each holder of a certificate or certificates which immediately prior to the Effective Date represented outstanding shares of Old Common Stock (the "Old Common Stock Certificates," whether one or more) shall be entitled to receive upon surrender of such Old Common Stock Certificates to the Corporation's Transfer Agent for cancellation, a certificate or certificates (the "New Common Stock Certificates," whether one or more) representing the number of whole shares of New Common Stock into which and for which the shares of the Old Common Stock formerly represented by such Old Common Stock Certificates so surrendered, are reclassified under the terms hereof. From and after the Effective Date, Old Common Stock Certificates shall represent only the right to receive New Common Stock Certificates (and, where applicable, cash in lieu of fractional shares, as provided below) pursuant to the provisions hereof. No certificates or scrip representing fractional share interests in New Common Stock will be issued, and no such fractional share interest will entitle the holder thereof to vote, or to any rights of a stockholder of the Corporation. A holder of Old Common Stock Certificates shall receive, in lieu of any fraction of a share of New Common Stock to which the holder would otherwise be entitled, a cash payment therefor in an amount equal to the product of (a) the fraction of such share and (b) the average of the closing reported bid and asked prices of one share of Old Common Stock, as reported on the NASDAQ National Market System, for the ten trading days immediately preceding the Effective Date for which transactions in Old Common Stock are reported thereon. If more than one Old Common Stock Certificate shall be surrendered at one time for the

account of the same stockholder, the number of full shares of New Common Stock for which New Common Stock Certificates shall be issued shall be computed on the basis of the aggregate number of shares represented by the Old Common Stock Certificates so surrendered. In the event that the Transfer Agent determines that a holder of Old Common Stock Certificates has not tendered all the holder's certificates for exchange, the Transfer Agent shall carry forward any fractional share until all certificates of that holder have been presented for exchange such that payment for fractional shares to any one holder shall not exceed the value of one share. If any New Common Stock Certificate is to be issued in a name other than that in which the Old Common Stock Certificates surrendered for exchange are issued, the Old Common Stock Certificates so surrendered shall be properly endorsed and otherwise in proper form for transfer, and the person or persons requesting such exchange shall affix any requisite stock transfer tax stamps to the Old Common Stock Certificates surrendered, or provide funds for their purchase, or establish to the satisfaction of the Transfer Agent that such taxes are not payable. From and after the Effective Date, the amount of capital represented by the shares of the New Common Stock into which and for which the shares of the Old Common Stock are reclassified under the terms hereof shall be the same as the amount of capital represented by the shares of Old Common Stock so reclassified, until thereafter reduced or increased in accordance with applicable law.

SECOND: That said amendment has been duly adopted in accordance with the requirements of Sections 141, 228 and 242 of the DGCL.

THIRD: That this Certificate of Amendment of the Restated Certificate of Incorporation shall be effective on October 21, 1998 at 12:01 a.m., Eastern Standard Time.

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed on this 28th day of September, 1998 by Ray R. Rogers, its authorized officer, who acknowledges under penalty of perjury that said amendment is the act and deed of the Corporation and that the facts stated herein are true and correct.

OXIS INTERNATIONAL, INC.

By: /s/ Ray R. Rogers

Name: Ray R. Rogers

Title: Chief Executive Officer

EXHIBIT 99.1

FOR IMMEDIATE RELEASE

For more information, contact:

Will Anderson Mike De Mello
KVO, Inc. OXIS International, Inc.
503/ 221-2351 800/ 547-3686
will_anderson@kvo.com mdemello@oxis.com

OXIS INTERNATIONAL'S BOARD OF DIRECTORS APPROVES ONE FOR FIVE REVERSE STOCK
SPLIT PREVIOUSLY AUTHORIZED BY STOCKHOLDERS

PORTLAND, ORE. -- OCTOBER 19, 1998 -- OXIS International, Inc. (NASDAQ: OXIS; Nouveau Marche: OXIS) today announced that its board of directors has authorized the effectuation of the one for five reverse stock split approved by its stockholders at its annual meeting last July. The Company expects that its stock will commence trading on a post-split basis at the opening of the stock market on October 21, 1998.

"The board of directors expects that a decrease in the number of shares of common stock outstanding will increase the bid price of the stock and bring the Company into compliance with the listing requirements of the NASDAQ National Market System," stated Ray R. Rogers, OXIS International's chairman and CEO. "We believe that the continuation of our stock's NASDAQ National Market listing to be in the best interests of our stockholders. Furthermore, we expect that the post-split share price will allow us access to a larger audience of potential investors."

OXIS International, Inc. is a drug discovery and diagnostics company focused on the development of novel therapeutic molecules, diagnostic products and supportive technologies to diagnose, treat and prevent diseases associated with damage from free radicals and reactive oxygen species. Through its catalog, the Company also offers assays, spin traps, antioxidants and fine chemicals to basic and clinical researchers working in the oxidative stress area.

- more -

Certain of the statements contained in this press release are forward-looking statements, including statements concerning the future share price of the Company's stock. The events

OXIS INTERNATIONAL'S BOARD OF DIRECTORS APPROVES TOCK SPLIT
10/19/98
PAGE 2 OF 2

described herein may not occur in a timely manner, or at all. Accordingly, the Company's future activities may differ materially from those projected in the forward-looking statements.

OXIS International has headquarters in Portland, Ore., with research facilities outside Paris, France, and instrument manufacturing operations in Philadelphia, Pa. Visit OXIS International on the World Wide Web at <http://www.oxis.com>.

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