

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 13D

UNDER THE SECURITIES EXCHANGE ACT OF 1934
(AMENDMENT NO. ____)*

AVI Biopharma, Inc.

(Name of Issuer)
Common Stock, \$.0001 par value

(Title of Class of Securities)
637184 10 8

(CUSIP Number)
Carol E. Malkinson, Esq.
Medtronic, Inc.
710 Medtronic Parkway Northeast
Minneapolis, Minnesota 55432
(612) 514-4000

(Name, Address and Telephone Number of Person Authorized to Receive
Notices and Communications)
June 20, 2001

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box. []

NOTE: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7(b) for other parties to whom copies are to be sent.

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1 NAMES OF REPORTING PERSONS/I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Medtronic, Inc.
41-0793183

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a) []

(b) []

3 SEC USE ONLY

4 SOURCE OF FUNDS (SEE INSTRUCTIONS)

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

[]

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Minnesota

NUMBER OF
SHARES
BENEFICIALLY
OWNED BY
EACH
REPORTING
PERSON
WITH

7

SOLE VOTING POWER

4,408,451 (includes 3,000,000 shares which may be purchased upon exercise of exercisable
warrant)

8

SHARED VOTING POWER

0

9

SOLE DISPOSITIVE POWER

4,408,451 (includes 3,000,000 shares which may be purchased upon exercise of exercisable
warrant)

10

SHARED DISPOSITIVE POWER

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,408,451 (includes 3,000,000 shares which may be purchased upon exercise of exercisable warrant)

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

[]

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

17.0%

14 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

CO

SCHEDULE 13D

1 NAMES OF REPORTING PERSONS/I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Medtronic Asset Management, Inc.
41-1721127

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a) []

(b) []

3 SEC USE ONLY

4 SOURCE OF FUNDS (SEE INSTRUCTIONS)

AF

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

[]

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Minnesota

NUMBER OF
SHARES
BENEFICIALLY
OWNED BY
EACH
REPORTING
PERSON
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SOLE VOTING POWER

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warrant)

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SHARED VOTING POWER

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SOLE DISPOSITIVE POWER

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SHARED DISPOSITIVE POWER

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13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)	
	17.0%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)	
	CO	

Item 1. SECURITY AND ISSUER

The class of equity security to which this statement relates is the Common Stock, \$0.0001 par value per share, of AVI Biopharma, Inc. ("AVI"). The name and address of the principal executive offices of the issuer of such securities are AVI Biopharma, Inc., One Southwest Columbia Street, Suite 1105, Portland, Oregon 97258.

Item 2. IDENTITY AND BACKGROUND

(a), (b) and (c)

Medtronic, Inc. ("Medtronic"), 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432, is a Minnesota corporation, principally engaged in the business of therapeutic medical technology, specializing in implantable and interventional therapies. Medtronic Asset Management, Inc., 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432, a Minnesota corporation ("MAMI") is a wholly-owned subsidiary of Medtronic through which Medtronic holds certain investments. Information is provided below with respect to persons who are directors and executive officers of the reporting persons.

William W. George, Chairman and Director, Medtronic, Inc., 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Arthur D. Collins, Jr., President, Chief Executive Officer and Director, Medtronic, Inc., and President and Director, MAMI, 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Glen D. Nelson, M.D., Vice Chairman and Director, Medtronic, Inc., 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Michael R. Bonsignore, Director, Medtronic, Inc., Chairman and Chief Executive Officer, Honeywell International, Inc., 101 Columbia Road, P. O. Box 4000, Morristown, New Jersey 07962-2497;

William R. Brody, M.D., Ph.D., Director, Medtronic, Inc., President, The Johns Hopkins University, 3400 North St. Charles St., 242 Garland Hall, Baltimore, MD 21218;

Paul W. Chellgren, Director, Medtronic, Inc., Chairman and Chief Executive Officer, Ashland Inc., 50 E. RiverCenter Boulevard, P.O. Box 391, Covington, KY 41012-0391;

Antonio M. Gotto, Jr., M.D., Director, Medtronic, Inc., Dean, Cornell University Medical College, Medical Affairs Provost, Cornell University, Office of the Dean, 1300 York Avenue, New York, NY 10021;

Bernadine P. Healy, M.D., Director, Medtronic, Inc., President and CEO, American Red Cross, 430 17th Street, N.W., Washington, DC 20036;

Jean-Pierre Rosso, Director, Medtronic, Inc., Chairman and Chief Executive

Officer, CNH Global N.V., 700 State Street, Racine, WI 53404;

Jack W. Schuler, Director, Medtronic, Inc., Chairman, Stericycle, Inc. and Ventana Medical Systems, Inc., 1419 Lake Cook Road, Suite 410, Deerfield, IL 60015;

Gordon M. Sprenger, Director, Medtronic, Inc., Executive Officer, Allina Health System, 5601 Smetana Drive, Minneapolis, MN 55440;

Jeffrey Balagna, Senior Vice President and Chief Information Officer, Medtronic, Inc., 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432;

Janet S. Fiola, Senior Vice President, Human Resources, Medtronic, Inc., 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Robert Guezuraga, Senior Vice President and President, Cardiac Surgery, Medtronic, Inc., 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Steven B. Kelmar, Senior Vice President, External Affairs, Medtronic, Inc., 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Stephen H. Mahle, Senior Vice President and President, Cardiac Rhythm Management, Medtronic, Inc., 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Andrew P. Rasdal, Senior Vice President and President, Vascular, Medtronic, Inc., 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Robert L. Ryan, Senior Vice President and Chief Financial Officer, Medtronic, Inc., and Chief Financial Officer and Director, MAMI, 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

David J. Scott, Senior Vice President and General Counsel and Secretary, Medtronic, Inc. and Vice President, Secretary and Director, MAMI, 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Keith E. Williams, Senior Vice President and President, Neurological, Spinal, and ENT, Medtronic, Inc., 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Barry W. Wilson, Senior Vice President and President, International, Medtronic, Inc., 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

(d) and (e)

To the knowledge of the reporting persons, neither the reporting persons nor any of the persons listed above has, during the last five years, been convicted in a criminal proceeding or was, during the last five years, a party to a civil proceeding as a result of which such person was or is subject to a judgment, decree or final order enjoining future

violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) All of the individuals referred to above are United States citizens, except Mr. Wilson, who is a dual citizen of the United Kingdom and South Africa.

Item 3. SOURCE AND AMOUNT OF FUNDS OR OTHER CONSIDERATION

This statement relates to an Investment Agreement entered into on May 22, 2001 (the "Investment Agreement") between AVI and MAMI. Pursuant to the Investment Agreement, on June 20, 2001, MAMI purchased 1,408,451 shares of AVI Common Stock at a price of \$7.10 per share and received a warrant to purchase an additional 3,000,000 shares of AVI Common Stock (the "Warrant") exercisable at a price of \$10.00 per share at any time during the five years after June 20, 2001. The

Investment Agreement contemplates additional purchases by MAMI of up to \$10,000,000 of AVI Common Stock subject to the achievement of certain milestones and the receipt of certain governmental and regulatory approvals. Funds for the purchase of such shares, including any shares purchased upon exercise of the Warrant, have been and will be provided out of the working capital of MAMI following a capital contribution in like amount made by Medtronic, which owns all the issued and outstanding shares of MAMI.

Item 4. PURPOSE OF TRANSACTION

MAMI has acquired the shares of AVI Common Stock and the Warrant solely for investment purposes. Based upon its evaluation of AVI's financial condition, market conditions and other factors it may deem material, the reporting persons may seek to acquire additional shares of AVI Common Stock in the open market or in private transactions, or may dispose of all or any portion of the shares currently owned or which may be acquired upon exercise of the Warrant. Except as set forth in the preceding sentence or as provided in the Investment Agreement, the reporting persons presently do not have any definitive plans or proposals that relate to or would result in transactions of the kind described in paragraphs (a) through (j) of Item 4 of Schedule 13D, but may, at any time and from time to time, review, reconsider and discuss with AVI or others the reporting persons' positions with respect to AVI which could thereafter result in the adoption of such plans or proposals. At the time of MAMI's acquisition of the shares of AVI Common Stock and the Warrant, AVI and Medtronic entered into a License and Development Agreement (the "License Agreement") and a Supply Agreement (the "Supply Agreement"). Under the License Agreement, AVI granted to Medtronic a worldwide exclusive license for a family of antisense compounds, including Resten-NG(TM), which Medtronic expects to load on medical devices, including stents to treat vascular disease. Under the Supply Agreement, AVI agreed to supply all of Medtronic's needs for the products developed by Medtronic under the License Agreement at negotiated prices.

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Item 5. INTEREST IN SECURITIES OF THE ISSUER

(a) Medtronic, through MAMI, is the beneficial owner of 4,408,451 shares of Common Stock of AVI (including 3,000,000 shares which are not outstanding but which may be purchased upon exercise of the Warrant), which represents approximately 17.0% of the outstanding Common Stock of AVI (assuming exercise of the Warrant). To the knowledge of the reporting persons, no other person named in Item 2 beneficially owns any AVI shares.

(b) Medtronic, through MAMI, has the sole power to vote and the sole power to dispose of all shares of AVI Common Stock beneficially owned by it.

(c) The only transaction in the Common Stock of AVI that was effected by any person named in paragraph (a) above during the past 60 days is the acquisition of 1,408,451 shares and a Warrant to purchase 3,000,000 shares as reported in Item 3 above.

(d) No other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds of the sale of, the subject securities.

(e) Not applicable.

Item 6. CONTRACTS, ARRANGEMENTS, UNDERSTANDINGS OR RELATIONSHIPS WITH RESPECT TO SECURITIES OF THE ISSUER

As described in Item 3 above, MAMI is a party to the Investment Agreement pursuant to which MAMI acquired 1,408,451 shares of AVI Common Stock and a Warrant to purchase 3,000,000 shares and may acquire additional shares upon the happening of certain events. AVI and MAMI also entered into a registration

rights agreement which grants to MAMI and its transferees or assignees certain demand and piggyback registration rights regarding the registration for resale of (a) the AVI Common Stock acquired or to be acquired by MAMI pursuant to the Investment Agreement, (b) the Warrant and (c) the shares of AVI Common Stock which may be acquired upon exercise of the Warrant.

Item 7. MATERIAL TO BE FILED AS EXHIBITS

Exhibit A - Agreement by the persons filing this Form 13D to make a joint filing.

Exhibit B - Warrant to purchase 3,000,000 shares of AVI Common Stock dated June 20, 2001.

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SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: June 28, 2001

MEDTRONIC, INC.

By: /s/ DAVID J. SCOTT

David J. Scott
Senior Vice President and General Counsel

MEDTRONIC ASSET MANAGEMENT, INC.

By: /s/ DAVID J. SCOTT

David J. Scott
Vice President and Secretary

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EXHIBIT INDEX

EXHIBIT	DESCRIPTION
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A	Agreement by the persons filing this Form 13D to make a joint filing.
B	Warrant to purchase 3,000,000 shares of AVI Common Stock dated June 20, 2001.

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EXHIBIT A

The undersigned hereby agree to file a joint Schedule 13D with respect to the interests of the undersigned in AVI Biopharma, Inc., and that the Schedule 13D to which this Exhibit A is attached has been filed on behalf of each of the undersigned.

Dated: June 28, 2001

MEDTRONIC, INC.

By: /s/ DAVID J. SCOTT

David J. Scott
Senior Vice President and General Counsel

MEDTRONIC ASSET MANAGEMENT, INC.

By: /s/ DAVID J. SCOTT

David J. Scott
Vice President and Secretary

EXHIBIT B

THIS WARRANT, AND THE SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE HEREOF, HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS AND MAY NOT BE REOFFERED OR SOLD, TRANSFERRED, PLEDGED, HYPOTHECATED OR OTHERWISE DISPOSED OF, EXCEPT PURSUANT TO (1) REGISTRATION OR (2) AN OPINION OF COUNSEL FOR THE COMPANY OR OTHER COUNSEL REASONABLY ACCEPTABLE TO THE COMPANY TO THE EFFECT THAT SUCH REGISTRATION IS NOT REQUIRED. THIS WARRANT IS ALSO SUBJECT TO THE TERMS OF AN INVESTMENT AGREEMENT DATED MAY 22, 2001.

WARRANT

To Purchase Shares of Common Stock of

AVI BIOPHARMA, INC.

June 20, 2001

AVI BioPharma, Inc., an Oregon corporation (the "Company"), for value received, hereby certifies that Medtronic Asset Management, Inc., a Minnesota corporation, or its registered assigns (the "Holder") is entitled, subject to the terms set forth below, upon exercise of this Warrant to purchase from the Company 3,000,000 shares of Common Stock, \$0.0001 par value, of the Company (as further defined in Section 5 below, "Common Stock"). Until adjusted as provided by the terms of this Warrant, the exercise price per share (the "Exercise Price") shall be \$10. The shares issuable upon exercise of this Warrant, as adjusted from time to time pursuant to the provisions of this Warrant, are hereinafter referred to as the "Warrant Shares."

This Warrant is further subject to the following provisions, terms and conditions:

1. TERM. Subject to Section 13 below, this Warrant may be exercised by the Holder, in whole or in part, at any time before the close of business on the date five years after the date hereof.

2. MANNER OF EXERCISE. This Warrant may be exercised by the Holder, in whole or in part (but not as to any fraction of a share of Common Stock), by surrendering this Warrant, with the Exercise Form attached hereto as EXHIBIT A filled in and duly executed by such Holder or by such Holder's duly authorized attorney, to the Company at its principal office accompanied by payment of the Exercise Price in the amount of the Exercise Price multiplied by the number of shares as to which the Warrant is being exercised. The Exercise Price may be paid in the form of a check or wire transfer of funds.

3. EFFECTIVE DATE OF EXERCISE. Each exercise of this Warrant shall be deemed effective as of the close of business on the day on which this Warrant is surrendered to the Company as provided in Section 2 or Section 3(a) above. At such time, the person

or persons in whose name or names any certificates for Warrant Shares shall be issuable upon such exercise shall be deemed to have become the holder or holders of record of the Warrant Shares represented by such certificates. Within 10 days after the exercise of this Warrant in full or in part, the Company will, at its expense, cause to be issued in the name of and delivered to the Holder or such other person as the Holder may (upon payment by such Holder of any applicable transfer taxes) direct: (i) a certificate or certificates for the number of full Warrant Shares to which such Holder is entitled upon such exercise, and (ii) unless this Warrant has expired, a new Warrant or Warrants (dated the date hereof and in form identical hereto) representing the right to purchase the remaining number of shares of Common Stock, if any, with respect to which this

Warrant has not then been exercised.

4. ADJUSTMENTS TO EXERCISE PRICE. The above provisions are, however, subject to the following:

(a) (i) If the Company shall at any time after the date of this Warrant subdivide or combine the outstanding shares of Common Stock or declare a dividend payable in Common Stock, then the number of shares of Common Stock for which this Warrant may be exercised as of immediately prior to the subdivision, combination or record date for such dividend payable in Common Stock shall forthwith be proportionately decreased, in the case of combination, or increased, in the case of subdivision or dividend payable in Common Stock.

(ii) If the Company shall at any time after the date of this Warrant subdivide or combine the outstanding shares of Common Stock or declare a dividend payable in Common Stock, the Exercise Price in effect immediately prior to the subdivision, combination or record date for such dividend payable in Common Stock shall forthwith be proportionately increased, in the case of combination, or decreased, in the case of subdivision or dividend payable in Common Stock.

(b) If any capital reorganization or reclassification of the capital stock of the Company, or share exchange, combination, consolidation or merger of the Company with another corporation, or the sale of all or substantially all of its assets to another corporation shall be effected in such a way that holders of Common Stock shall be entitled to receive stock, securities or assets with respect to or in exchange for Common Stock, then, as a condition of such reorganization, reclassification, share exchange, combination, consolidation, merger or sale, lawful and adequate provision shall be made whereby the Holder shall thereafter have the right to receive upon exercise of this Warrant, upon the basis and upon the terms and conditions specified in this Warrant and in lieu of the shares of the Common Stock of the Company into which this Warrant could be exercisable or convertible, such shares of stock, securities or assets as may be issued or payable with respect to or in exchange for a number of outstanding shares of such Common Stock equal to the maximum number of shares of such stock issuable upon exercise of this Warrant, and in any such case appropriate provisions shall be made with respect to the rights and interests of Holder to the end that the provisions hereof (including without limitation provisions for

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adjustments of the Exercise Price and of the number of shares purchasable upon exercise of this Warrant) shall thereafter be applicable, as nearly as may be, in relation to any shares of stock, securities or assets thereafter deliverable upon the exercise hereof. The Company shall not effect any such share exchange, combination, consolidation, merger or sale, unless prior to the consummation thereof the successor corporation (if other than the Company) resulting from such share exchange, combination, consolidation or merger or the corporation purchasing such assets shall assume by written instrument executed and mailed to the Holder, at the last address of such Holder appearing on the books of the Company, the obligation to deliver to such Holder such shares of stock, securities or assets that, in accordance with the foregoing provisions, such Holder may thereafter be entitled to receive upon exercise of this Warrant.

(c) If at any time after the date of this Warrant the Company distributes to all holders of Common Stock any assets (excluding ordinary cash dividends), debt securities, or any rights or warrants to purchase debt securities, assets or other securities (excluding Common Stock covered by Sections 5(a) or (b)), the Exercise Price shall be adjusted in accordance with the formula:

$$E(1) = E \times (O \times M) - F$$

where:

E(1) = the adjusted Exercise Price.
 E = the current Exercise Price.
 M = the average market price of Common Stock for the 30 consecutive trading days commencing 45 trading days before the record date mentioned below.
 O = the number of shares of Common Stock outstanding on the record date mentioned below.
 F = the fair market value on the record date of the aggregate of all assets, securities, rights or warrants distributed. The Company's Board of Directors shall determine the fair market value in the exercise of its reasonable judgment.

The adjustment shall be made successively whenever any such distribution is made and shall become effective immediately after the record date for the determination of stockholders entitled to receive the distribution.

(d) Upon any adjustment of the Exercise Price, then and in each such case, the Company shall give written notice thereof, by first class mail or equivalent, postage prepaid, addressed to the Holder of this Warrant at the address of such Holder as shown on the books of the Company, which notice shall state the Exercise Price resulting from such adjustment and the increase or decrease, if any, in the number of shares for which this Warrant may be exercised, setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based.

5. COMMON STOCK. As used herein, the term "Common Stock" shall mean and include the Company's presently authorized shares of common stock and shall also include any capital stock of any class of the Company hereafter authorized that is not limited to a fixed sum or percentage in respect of the rights of the holders thereof to participate in dividends or in the distribution, dissolution or winding up of the Company.

6. NO VOTING RIGHTS. This Warrant shall not entitle the Holder to any voting rights or other rights as a shareholder of the Company unless and until exercised or converted pursuant to the provisions hereof.

7. EXERCISE OR TRANSFER OF WARRANT OR RESALE OF COMMON STOCK. The Holder, by acceptance hereof, agrees to give written notice to the Company before exercising this Warrant, or transferring this Warrant, in whole or in part, or transferring any shares of Common Stock issued upon the exercise hereof, of such Holder's intention to do so, describing briefly the manner of any proposed transfer. Such notice shall include an opinion of counsel reasonably satisfactory to the Company that (i) the proposed exercise or transfer may be effected without registration or qualification under the Securities Act of 1933, as amended (the "Act"), and any applicable state securities or blue sky laws, or (ii) the proposed exercise or transfer has been registered under such laws. Upon delivering such notice, such Holder shall be entitled to exercise or transfer this Warrant or such Warrant Shares, all in accordance with the terms of the notice delivered by such Holder to the Company; provided, that an appropriate legend may be endorsed on the certificates for such shares respecting restrictions upon transfer thereof necessary or advisable in the opinion of counsel to the Company to prevent further transfer that would be in violation of Section 5 of the Act and applicable state securities or blue sky laws.

If in the opinion of counsel to the Company or other counsel reasonably acceptable to the Company the proposed exercise, transfer or disposition of this Warrant or the Warrant Shares described in the written notice given pursuant to this Section 8 may not be effected without registration of this Warrant or the Warrant Shares, the Company shall promptly give written notice thereof to the Holder within 10 days after the Company receives such notice, and such holder will limit its activities in respect to such as, in the opinion of such counsel, is permitted by law.

Further, notwithstanding anything above to the contrary, this Warrant may not be transferred by the Holder hereof in warrant form except to a subsidiary of the Holder.

8. COVENANTS OF THE COMPANY. The Company covenants and agrees that all shares that may be issued upon exercise of this Warrant will, upon issuance, be duly authorized and issued, fully paid, nonassessable and free from all taxes, liens and charges with respect to the issuance thereof. The Company further covenants and agrees that the Company will at all times have authorized, and reserved for the purpose of issuance upon exercise hereof, a sufficient number of shares of its Common Stock to provide for the exercise of this Warrant.

9. CERTAIN NOTICES. The Holder shall be entitled to receive from the Company immediately upon declaration thereof and at least 20 days prior to the record date for determination of shareholders entitled thereto or to vote thereon (or, if no record date is

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set, prior to the event), written notice of any event that could require an adjustment pursuant to Section 5 hereof or of the dissolution or liquidation of the Company. All notices under this Warrant shall be in writing and shall be delivered personally or by telecopy (receipt confirmed) to such party (or, in the case of an entity, to an executive officer of such party) or shall be sent by a reputable express delivery service or by certified mail, postage prepaid with return receipt requested, addressed as follows:

if to the Holder, to:

Medtronic, Inc.
710 Medtronic Parkway NE
Minneapolis, MN 55432-5604

with separate copies thereof addressed to

Attention: General Counsel
Mail Stop LC400
Telecopier No.: (763) 572-5459

and

Attention: Vice President and Chief Development Officer
Mail Stop LC390
Telecopier No.: (763) 505-2542

if to the Company to:

AVI BioPharma, Inc.
One SW Columbia
Portland, OR 97258
Attn: President

With separate copies to:

Robert A. Stout, Esq.
HURLEY, LYNCH & RE, P.C.
747 SW Industrial Way

Any party may change the above-specified recipient and/or mailing address by notice to all other parties given in the manner herein prescribed. All notices shall be deemed given on the day when actually delivered as provided above (if delivered personally or by telecopy) or on the day shown on the return receipt (if delivered by mail or delivery service).

10. REGISTRATION RIGHTS. The Holders of this Warrant and the Warrant Shares are entitled to the rights and benefits of all of the terms, provisions and conditions of that certain Registration Rights Agreement dated of even date herewith between the Company and Medtronic Asset Management, Inc., provided an express sharing or assignment of such rights and benefits is made to each such Holder by such Holder's

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transferor. Notwithstanding the foregoing or any provisions of the Registration Rights Agreement to the contrary, the Holder agrees not to sell or transfer any Warrant Shares for at least thirty-two (32) days after conversion or exercise of this Warrant which resulted in the issuance of such Warrant Shares.

11. MISCELLANEOUS.

(a) No amendment, modification or waiver of any provision of this Warrant shall be effective unless the same shall be in writing and signed by the holder hereof.

(b) This Warrant shall be governed by and construed in accordance with the laws of the State of Oregon.

12. CANCELLATION RIGHTS. The Company may cancel this Warrant, to the extent it remains unexercised, at any time if the Daily Price has exceeded \$20.00 for 20 consecutive trading days immediately preceding the date of notice of such cancellation, upon 190 days' notice given in accordance with Section 10 and Holder's failure to exercise this Warrant within such notice period. No consideration or price shall be payable by the Company for such cancellation. For the purpose of the foregoing sentence, the term "Daily Price" shall mean, for any relevant day, the closing bid price on that day as reported by the principal exchange or quotation system on which prices for the Common Stock are reported, and such \$20.00 shall be subject to adjustment in the same manner in which the Exercise Price is subject to adjustment under Section 4 and the Holder is entitled to notice thereof under Section 4(d). The Holder may exercise this Warrant in whole or in part at any time during such 190-day notice period. This Warrant shall no longer be exercisable in whole or in part from and after the 191st day after such notice.

IN WITNESS WHEREOF, the Company has caused this Warrant to be signed by its authorized officer and dated as of the date stated above.

AVI BIOPHARMA, INC.

By: /s/ Denis R. Burger
Its: CEO

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EXHIBIT A

NOTICE OF EXERCISE OF WARRANT -- To Be Executed by the Registered Holder in
Order to Exercise the Warrant

The undersigned hereby irrevocably elects to exercise the attached Warrant to purchase, for cash pursuant to Section 2 thereof, _____ shares of Common Stock issuable upon the exercise of such Warrant. The undersigned requests that certificates for such shares be issued in the name of _____. If this Warrant is not fully exercised, the undersigned requests that a new Warrant to purchase the balance of shares remaining purchasable hereunder be issued in the name of _____.

Date: _____, 20__

[name of registered Holder]

[signature]

[street address]

[city, state, zip]

[tax identification number]