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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

SCHEDULE 13D

**Under the Securities Exchange Act of 1934
(Amendment No. 2)***

AVI Biopharma, Inc.

(Name of Issuer)

Common Stock, \$.0001 par value

(Title of Class of Securities)

637184 10 8

(CUSIP Number)

Neil P. Ayotte
Medtronic, Inc.
710 Medtronic Parkway
Minneapolis, MN 55432
(612) 514-4000

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

May 19, 2004

(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 that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-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 §240.13d-7 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. Name of Reporting Person: Medtronic, Inc. I.R.S. Identification Nos. of above persons (entities only): 41-0793183

2. Check the Appropriate Box if a Member of a Group (See Instructions):*

*Joint Filing

(a)

(b)

3. SEC Use Only:

4. Source of Funds (See Instructions):
Not Applicable

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e):

6. Citizenship or Place of Organization:
Minnesota

7. Sole Voting Power:
3,000,000 (includes 3,000,000 shares which may be purchased upon exercise of exercisable warrant)

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With

8. Shared Voting Power:
0

9. Sole Dispositive Power:
3,000,000 (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:
3,000,000 (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):
6.4%

14. Type of Reporting Person (See Instructions):
CO

1. Name of Reporting Person: Medtronic International, Ltd.
I.R.S. Identification Nos. of above persons (entities only): 41-1278948

2. Check the Appropriate Box if a Member of a Group (See Instructions):*

*Joint Filing

(a)

(b)

3. SEC Use Only:

4. Source of Funds (See Instructions):
Not Applicable

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e):

6. Citizenship or Place of Organization:
Delaware

7. Sole Voting Power:
3,000,000 (includes 3,000,000 shares which may be purchased upon exercise of exercisable warrant)

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With

8. Shared Voting Power:
0

9. Sole Dispositive Power:
3,000,000 (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:
3,000,000 (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):
6.4%

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, MN 55432, is a Minnesota corporation, principally engaged in the business of therapeutic medical technology, specializing in implantable and interventional therapies. Medtronic International, Ltd. (“MIL”), 710 Medtronic Parkway N.E., Minneapolis, MN 55432, a Delaware corporation, 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.

Arthur D. Collins, Jr., Chairman and Director, Medtronic, 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Richard H. Anderson, Director, Medtronic, Executive Vice President, United Health Group, 9900 Bren Road, Minnetonka, MN 55434;

Michael R. Bonsignore, Director, Medtronic, Retired Chairman, Honeywell International, Inc., 101 Columbia Road, P. O. Box 4000, Morristown, NJ 07962-2497;

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

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

Shirley Ann Jackson, Ph.D., Director, Medtronic, President, Rensselaer Polytechnic Institute, 110 8th Street, Troy Building, Troy, NY 12180;

Denise M. O’Leary, Director, Medtronic, Private Venture Capital Investor, 124 Warren Road, San Mateo, CA 94401;

Robert C. Pozen, Director, Medtronic, Chairman, MFS Investment Management, 500 Boylston Street, Boston, MA 02116;

Jean-Pierre Rosso, Director, Medtronic, Former Chairman and CEO, CASE Corp. and CNH Global N.V., 219 East Lake Shore Drive, Chicago, IL 60611;

Jack W. Schuler, Director, Medtronic, Chairman, Stericycle, Inc. and Ventana Medical Systems, Inc., 28161 North Keith Drive, Lake Forest, IL 60045;

Gordon M. Sprenger, Director, Medtronic, Retired from Allina Health System, 2800 Chicago Avenue S., Minneapolis, MN 55407;

Susan Alpert, Ph.D., M.D., Vice President, Chief Quality and Regulatory Officer, Medtronic, 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

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

Jean-Luc Butel, Sr. Vice President and President, Asia Pacific, Medtronic, 580 Horikawa-cho, Saiwai-ku, Kanagawa, Japan 212-0013

Terrance L. Carlson, Sr. Vice President, General Counsel and Corporate Secretary, Medtronic and Director, MIL, 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

Michael DeMane, Sr. Vice President, Spinal, ENT, Medtronic, 1800 Pyramid Place, Memphis, TN 38132;

Gary L. Ellis, Vice President, Controller, Treasurer, Medtronic, and Director, MIL, 710 Medtronic Parkway N.E., Minneapolis, MN 55432.

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

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

William A. Hawkins, President and Chief Operating Officer, Medtronic, 710 Medtronic Parkway N.E., Minneapolis, MN 55432;

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

Stephen N. Oesterle, M.D., Sr. Vice President Medicine & Technology, Medtronic, 710 Medtronic Parkway N.E., Minneapolis, MN 55432

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

Scott Ward, Sr. Vice President, Vascular, Medtronic, 3576 Unocal Place, Santa Rosa CA 95403;

Barry W. Wilson, Senior Vice President and President Europe, Middle East, Canada & Emerging Markets, Medtronic, Route de Molliau, Tolochenaz, Switzerland 1131.

(d), (e) and (f):No change.

Item 3. Source and Amount of Funds or Other Consideration

No change

Item 4. Purpose of Transaction

MIL has acquired the shares of AVI Common Stock and the Warrant solely for investment purposes.

Based upon their evaluation of AVI's financial condition, market conditions and other factors they 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 entered into at the time of the initial acquisition of the AVI Common Stock and Warrant, 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 the initial 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™, for the treatment of vascular disease with the use of medical devices, including stents. Under the Supply Agreement, AVI agreed to supply at negotiated prices all of Medtronic's antisense compounds needs for any products developed by Medtronic under the License Agreement .

Item 5. Interest in Securities of the Issuer

(a) Medtronic, through MIL, is the beneficial owner of 3,000,000 shares of Common Stock of AVI by means of a warrant to purchase common shares at \$10 per share. This warrant expires on June 20, 2006. Assuming Medtronic exercised this warrant, it would own approximately 6.4% of the outstanding Common Stock of AVI. To the knowledge of the Reporting Persons, no other person named in Item 2 beneficially owns any AVI shares.

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

(c) Medtronic, through MIL, made the following open market sales of AVI's Common Stock:

During May 2004, Medtronic made the decision to sell its shares of AVI common stock. Between May 14, 2004 and May 25, 2004, MIL sold all of its shares of AVI. Specifically, MIL sold 1,408,451 shares of AVI common stock over the course of the following dates:

<u>Trade Date</u>	<u>Number of Shares Sold</u>	<u>Price per share</u>
5/14/04	60,000	\$2.2905
5/17/04	100,000	\$2.2332
5/18/04	139,196	\$2.2577
5/19/04	225,000	\$2.2416
5/20/04	68,097	\$2.2439
5/21/04	100,000	\$2.1619
5/24/04	150,000	\$2.1155
5/25/04	566,158	\$2.1655

(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

No change.

Item 7. Material to be Filed as Exhibits

Exhibit A – Agreement by the persons filing this Schedule 13D Amendment to make a joint filing—incorporated by reference to Exhibit A to Amendment No. 1 to Schedule 13D filed January 8, 2002.

Exhibit B – Warrant to purchase 3,000,000 shares of AVI Common Stock dated June 20, 2001—incorporated by reference to Exhibit B to the initial Schedule 13D filed June 29, 2001.

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: February 14, 2005

MEDTRONIC, INC.

By: /s/ Neil P. Ayotte

Neil P. Ayotte
Vice President, Sr. Legal Counsel and Assistant
Secretary

MEDTRONIC INTERNATIONAL, LTD.

By: /s/ Neil P. Ayotte

Neil P. Ayotte
Sr. Legal Counsel and Assistant Secretary

EXHIBIT INDEX

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