



NEWS RELEASE

Contacts:

Catherine Peloquin
Public Relations (U.S.)
763-526-2494

Jeff Warren
Investor Relations
763-505-2696

FOR IMMEDIATE RELEASE

MEDTRONIC CLINICAL TRIAL EVALUATING THE NEWEST RADIOFREQUENCY ABLATION TOOLS FOR ATRIAL FIBRILLATION COMPLETES ENROLLMENT

Company's Cardiac Ablation System Represents a Breakthrough Technology Platform; Offers Unique Tools Designed to Customize Care and Reduce Procedure Times

MINNEAPOLIS – May 15, 2009 – Medtronic, Inc. (NYSE: MDT) today announced completion of enrollment in the TTOP-AF (Tailored Treatment of Permanent Atrial Fibrillation) clinical trial. The study is evaluating the use of the latest radiofrequency (RF) ablation technology, the Medtronic Ablation Frontiers Cardiac Ablation System, for the treatment of continuous atrial fibrillation (AF). A leading advancement from currently available RF ablation tools, the system is comprised of a RF generator (or energy source) and three anatomically shaped mapping and ablation catheters that target three areas of the heart for AF treatment. The system is approved for use in Europe and is under investigational use in the United States.

“Medtronic plans to be a leader in AF ablation by designing and delivering breakthrough atrial fibrillation therapies to help physicians treat the estimated seven million people worldwide suffering from this disease,” said Reggie Groves, vice president and general manager of Medtronic’s AF Solutions division. “Our goal is to provide safe, easy solutions that offer more predictable procedure times than current

treatment methods and will allow physicians to customize care and reduce the reoccurrence of AF for their patients.”

The completion of enrollment follows Medtronic’s recent acquisitions of Ablation Frontiers, LLC, and CryoCath LP, to form Medtronic’s AF Solutions division. When combined with Medtronic's existing EP Systems product portfolio, AF Solutions plans to offer a complete line of diagnostic, cryoablation (freezing technology) and radiofrequency ablation tools to treat the full range of AF patients.

“This unique system will offer physicians a way to tailor their care for treating continuous atrial fibrillation in their patients,” said John Hummel, M.D., professor, Division of Cardiovascular Medicine at The Ohio State University College of Medicine in Columbus, Ohio. “In this clinical trial, the anatomical design of each catheter allowed me to efficiently map and ablate broad areas in the left atrium. As a result, the simplified process helped me decrease procedure times.”

About the Medtronic Ablation Frontiers Cardiac Ablation System

The Cardiac Ablation System is a minimally invasive catheter and generator system that delivers customized radiofrequency energy designed to eliminate or isolate abnormal electrical impulses in the left atrium (upper left chamber of the heart) that initiate or sustain AF. The three-dimensional, multi-electrode catheters are designed to allow physicians to identify and selectively ablate a broader area of heart tissue without the use of current single point catheters and complex mapping and navigation equipment.

The Cardiac Ablation System includes:

- Pulmonary Vein Ablation Catheter (PVAC)TM - designed for mapping, ablating and verifying isolation of the pulmonary veins;

- Multi-Array Septal Catheter (MASC)TM - designed for mapping and ablating the left atrial septal wall;
- Multi-Array Ablation Catheter (MAAC)TM - designed for mapping and ablating the left atrial body; and
- GENius Multi-Channel Radiofrequency Generator – the unique RF energy delivery system allows physicians to tailor the location, depth and fill of each ablation lesion.

About TTOP-AF

This pivotal trial is studying the safety and efficacy of the Cardiac Ablation System in continuous AF patients. Patients were randomized to receive ablation therapy or receive commonly used drug treatments. For every three patients enrolled, approximately two received an ablation and one was randomly assigned to the drug therapy group. The trial allowed patients in the drug therapy group to receive an ablation if they did not respond to drug therapy. Twenty-four centers enrolled 209 patients who will be followed for at least six months after the ablation procedure. Upon trial completion, results will be submitted in consideration for U.S. Food and Drug Administration (FDA) approval for the Medtronic Ablation Frontiers Cardiac Ablation System.

About Atrial Fibrillation

Atrial fibrillation (AF or A Fib) is an irregular quivering or rapid heart rhythm in the upper chambers (atria) of the heart. AF is the most common cardiac rhythm condition, found in approximately three million Americans and seven million people worldwide.¹ Untreated AF patients have a two to seven times higher risk of stroke.² Atrial fibrillation causes inefficient pumping of the heart and can lead to other rhythm problems including chronic fatigue and congestive heart failure. Half of AF patients who receive

treatment are non-responsive to drug therapy, making them potential candidates for ablation therapy.

¹Millenium Research Report; "Global Markets For Atrial Fibrillation Treatment Devices 2008," March 2008; 1.

² T. Fetsch, EHJ. 2004;1385-1394.

About Medtronic

Medtronic, Inc. (www.medtronic.com), headquartered in Minneapolis, is the global leader in medical technology – alleviating pain, restoring health, and extending life for millions of people around the world.

Any forward-looking statements are subject to risks and uncertainties such as those described in Medtronic's Annual Report on Form 10-K for the year ended April 25, 2008. Actual results may differ materially from anticipated results.

-end-