

# Thyroid Health and the Environment

## THREATS AND EFFECTS

Friday, March 24, 2006

Washington, DC

Hamilton Crowne Plaza  
at 14th and K Streets, NW



AMERICAN  
THYROID  
ASSOCIATION

FOUNDED 1923



Jointly sponsored by Boston  
University School of Medicine  
and the American Thyroid  
Association



ATA Spring Meeting held in  
cooperation with the American  
Association of Clinical  
Endocrinologists (AACE)

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of Boston University School of Medicine and the American Thyroid Association. Boston University School of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

Boston University School of Medicine designates this educational activity for a maximum of 8 category 1 credits toward the AMA Physician's Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

## American Thyroid Association (ATA)

The ATA provides outstanding leadership in thyroidology by promoting excellence and innovation in clinical care, research, education, and public advocacy.

## Course Description

This symposium will focus on the effects of the environment on the thyroid, especially those factors that might adversely affect thyroid function. There will be introductory lectures concerning the physiology and pathophysiology of the thyroid and the biochemical and molecular events within the thyroid that can be affected by environmental chemicals and radiation. The major impact of iodine nutrition on the thyroid will be carefully reviewed, especially the current situation in the United States as well as the growing concern about mild-to-moderate iodine deficiency in women during their reproductive age and during pregnancy and the post-partum period, with emphasis on iodine nutrition in the nursing infant. There will be an in-depth discussion of environmental agents that could inhibit the concentration of iodine by the thyroid and the effects of environmental perchlorate on thyroid function in pregnant women, nursing mothers, children, and adults in the United States and South America. The effect of thiocyanate, a byproduct of smoking, on the concentration of iodine by the thyroid and by the breast into breast milk, will also be discussed, as will the environmental contaminants — nitrates and PCBs — on thyroid function. The radiation exposure of children and young adults in the Chernobyl area following the nuclear accident in 1986 will be discussed in-depth as well as the effect of radiation on gene mutations and the development of thyroid cancer and the role of radiation in the induction of autoimmune thyroid disease. Key areas for study and research will be discussed as a conclusion to the conference.

## MEETING REGISTRATION

**Space is limited— Register early!**

**REGISTER ONLINE** at the secure ATA web site [www.thyroid.org](http://www.thyroid.org).

**FAX** your completed form with credit card payment (no checks or money orders) to 678-341-3081. If you FAX, DO NOT MAIL, you risk duplicate charges.

**MAIL** your completed registration form with payment to: ATA Registration, c/o QMS, 6840 Meadowridge Court, Alpharetta, GA 30005. Phone 678-341-3056, 678-341-3081

**ADA:** To request reasonable accommodations for a disability, please notify [admin@thyroid.org](mailto:admin@thyroid.org), in writing, at least two weeks prior to the conference.

## Target Audience

Professionals and citizens interested in the impact of the environment on the thyroid, including pediatric, adult, and reproductive endocrinologists; perinatologists and neonatologists; epidemiologists and public health professionals, especially those interested in the impact of the environment on the health of the American population; basic and clinical scientists primarily interested in the assessment of environmental contaminants; federal, state, and local organizations involved with setting environmental standards; and citizens concerned about the effects of the environment on the health of the American population.

## American Association of Clinical Endocrinologists (AACE)

The American Association of Clinical Endocrinologists is a professional medical organization devoted to the enhancement of the practice of clinical endocrinology.

## Goals

1. To bring to the attention of various health care workers and professionals, as well as the general public, the potential adverse effects of environmental agents on thyroid function.
2. Provide to the attendees a balanced and appropriate evaluation of these environmental factors.

## Course Objectives

Following this program, the participant should be able to:

- ◆ Determine and differentiate the mechanisms of various environmental agents on thyroid function.
- ◆ Evaluate and distinguish the various environmental effects on thyroid function in a balanced and careful approach.
- ◆ Recognize and interpret the recommendations by various national and state agencies on the regulation of the potential environmental factors affecting thyroid health.
- ◆ Relate and report to their colleagues and the public a critique and summary of the effects of the environment on thyroid function.

## Support

This program is being supported in part by unrestricted educational grants from Genzyme, Inc. and Abbott Laboratories.

## HOTEL RESERVATIONS

**Group rate cut-off date Friday, March 3rd**

**REGISTER ONLINE** at the secure ATA web site [www.thyroid.org](http://www.thyroid.org).

**PHONE 877-227-6963**

Make your reservation at the Hamilton Crowne Plaza in Washington, DC. Indicate that you are with ATA/Thyroid and the Environment to receive the group rate.

A block of rooms has been reserved for the convenience of our attendees. For reservations, call the hotel directly and be sure to specify that you are attending the ATA meeting to receive the special room rate of \$159 per night, single or double, plus tax. (See information on back.)

# Chairs—Faculty—Program Committee

## PROGRAM CHAIRS

### **Lewis E. Braverman, MD**

*Course Director, Professor of Medicine,  
Boston University School of Medicine*

### **R. Thomas Zoeller, PhD**

*Professor of Biology, University of  
Massachusetts Biology Department*

## FACULTY

### **Benjamin Blount, PhD**

*Lead Research Chemist, National  
Center for Environmental Health;  
Centers for Disease Control and  
Prevention*

### **Gregory A. Brent, MD**

*Professor of Medicine and Physiology,  
VA Greater Los Angeles Healthcare  
System/UCLA*

*Secretary, American Thyroid  
Association*

### **David S. Cooper, MD**

*Director, Division of Endocrinology,  
Sinai Hospital of Baltimore*

*Professor of Medicine, Johns Hopkins  
University School of Medicine*

*President Elect, American Thyroid  
Association*

### **Hossein Gharib, MD, MACP, MACE**

*Professor of Medicine, Mayo Clinic  
College of Medicine*

*Past President, American Association  
of Clinical Endocrinologists*

### **John P. Gibbs, MD**

*Kerr-McGee Corporation*

### **Jerrold Heindel, PhD**

*Scientific Program Administrator,  
National Institute of Environmental  
Health Sciences; Division of  
Extramural Research and Training  
Cellular, Organ and Systems  
Pathobiology Branch*

### **Joseph G. Hollowell, Jr., MD, MPH**

*Clinical Professor of Pediatrics,  
University of Kansas*

### **Peter Laurberg, MD**

*Professor Endocrinology and  
Medicine, Department of  
Endocrinology, Aalborg Hospital,  
Aarhus University Hospital*

### **Ernest L. Mazzaferri, MD**

*Professor of Medicine, University of  
Florida, Division of Endocrinology*

*President, American Thyroid  
Association*

### **Yuri Nikiforov, MD, PhD**

*Associate Professor of Pathology and  
Medicine, University of Cincinnati*

### **Elizabeth Pearce, MD**

*Assistant Professor of Medicine,  
Boston University Medical Center*

### **Aldo A. Pinchera, MD**

*Professor and Chairman, University of  
Pisa, Dipartimento Di Endocrinologia*

### **Zofia Radikova, MD, PhD**

*Institute of Experimental Endocrinology,  
Slovak Academy of Sciences*

### **Elaine Ron, PhD**

*Senior Investigator, Radiation  
Epidemiology Branch, National  
Cancer Institute, NIH*

### **Michael D. Shelby, PhD**

*National Institute of Environmental  
Health Sciences*

### **Michael Zimmermann, MD**

*Senior Scientist, Swiss Federal Institute  
of Technology Zurich, Laboratory for  
Human Nutrition*

## PROGRAM COMMITTEE

### **Gregory A. Brent, MD**

*UCLA School of Medicine*

### **Ruth M. Belin, MD**

*Johns Hopkins University*

### **Hossein Gharib, MD**

*Mayo Clinic*

### **John P. Gibbs, MD**

*Kerr-McGee Corporation*

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*University of Kansas*

### **Elizabeth Pearce, MD**

*Boston University Medical Center*

### **Elaine Ron, PhD**

*NCI NIH - Radiation Epidemiology*

### **Michael D. Shelby, PhD**

*National Institute of Environmental  
Health Sciences*

## ATA STAFF

### **Barbara "Bobbi" Smith, CAE**

*Executive Director*

### **Theresa Ronk**

*Director of Finance & Member Services*

# Program Agenda

This schedule is subject to change.

## MORNING

7:15 **Registration and Continental Breakfast**

### Introduction

**Moderator: Lewis E. Braverman**

8:00 **Welcome and Introduction — Statement of Goals**

Ernest L. Mazzaferri, ATA President and Hossein Gharib, AACE Past President

8:15 **Regulation of Thyroid Function**

David S. Cooper

8:35 **Environmental Chemicals Impacting the Thyroid: Targets and Consequences**

R. Thomas Zoeller

### Iodine and Thyroid Physiology

**Moderator: Joseph Hollowell**

9:00 **National Trends in Iodine Nutrition: Is Everyone Getting Enough?**

Elizabeth Pearce

9:20 **Adverse Effects of Mild-to-Moderate Iodine Deficiency During Pregnancy and Childhood**

Michael Zimmermann

9:40 **Panel Discussion & Questions**

10:00 **Refreshment Break**

### Human Exposure to Perchlorate

**Moderator: Elizabeth Pearce**

10:20 **Biomonitoring Methods for Assessing Exposure to NIS-inhibitors**

Benjamin Blount

10:40 **Environmental Perchlorate Exposure during Pregnancy —Effects on Mother and Fetus**

John Gibbs

11:10 **Clinical Studies of Exposure to Perchlorate in the United States**

Lewis Braverman

11:35 **Panel Discussion & Questions**

12:00 **Break and Buffet Lunch**

12:20 **Luncheon Program: Invited Policy Maker/VIP**

## AFTERNOON

### Environmental Agents and Thyroid Health

**Moderator: Jerrold Heindel**

1:00 **Tobacco Smoke and the Thyroid in Susceptible Populations**

Peter Laurberg

1:30 **Nitrates and PCBs: Combined Effects on Thyroid Function**

Zofia Radikova

2:00 **Panel Discussion & Questions**

2:30 **Refreshment Break**

### Effects of Radiation on the Thyroid

**Moderator: Michael D. Shelby**

2:45 **Radiation Induced Gene Mutations and the Development of Thyroid Cancer**

Yuri Nikiforov

3:15 **Radiation Exposure and Thyroid Cancer: Epidemiological Studies**

Elaine Ron

3:35 **Role of Radiation in Autoimmune Thyroid Disease**

Aldo Pinchera

4:00 **Questions and Discussion**

### Future Directions

**Moderator: R. Thomas Zoeller**

4:25 **Thyroid and the Environment—Key Areas for Study and Research**

Gregory A. Brent

4:45 **Summary and Recommendations**

5:00 **Complete and Return the Evaluation and CME Credit Report Forms**

**REGISTER ONLINE** at the secure ATA web site [www.thyroid.org](http://www.thyroid.org).

# Location and General Information

## FIRST COME FIRST SERVED

Space is limited for this symposium — please register early.

### LOCATION

#### Hamilton Crowne Plaza

1001 14th Street, NW  
(14th and K Streets, NW)  
Washington, DC 20005  
Hotel Fax: 202-682-9525

**Emergency Calls:** During the day of this meeting only, March 24th, direct emergency calls to the hotel operator at 202-682-0111.

**Hotel Reservations:** Group Rate of \$159/night. Cut off date for group rate is Friday, March 3, 2006.

**Telephone:** 877-227-6963. Make your reservation at the Hamilton Crowne Plaza in Washington, DC. Indicate that you are with ATA/Thyroid and the Environment to receive the group rate.

### TRAVEL INFORMATION

The closest airport is Reagan National Airport (DCA). METRO rail is available at the airport to the McPherson Square Metro (2 blocks to hotel) or Farragut North (4 blocks to hotel). The hotel is approximately a 15-minute cab ride from Reagan National Airport. From Dulles Airport the cab ride will be approximately 45 minutes and from BWI approximately 45 minutes.

### POLICY ON FACULTY AND DISCLOSURE

It is the policy of the Boston University School of Medicine that the faculty and provider disclose real or apparent conflicts of interest relating to the topics of this educational activity, and also disclose discussions of unlabeled/unapproved uses of drugs or devices during their presentation(s). Detailed disclosure will be made in the course handout materials.

### AMERICANS WITH DISABILITIES ACT (ADA)

The ATA fully complies with the legal requirements of the ADA and the rules and regulations thereof.

### FEES (All Fees are in US Dollars)

#### Pre-Registration Cut Off Date:

March 21, 2006

Physicians/Scientists/  
Government and Public  
Health Officials ..... \$275  
Residents\*/Fellows\*/Allied  
Health Professionals ..... \$125

\*with verification of status

The registration fee includes instructional materials, lunch, and refreshment breaks. Foreign payments must be made by credit card or with a U.S. Dollar World Money Order.

**Refund Policy:** Refund requests must be submitted in writing. Requests submitted by fax or e-mail before March 15, 2006 will receive a registration refund less a 50% processing fee. No refunds will be made if submitted after March 15, 2006. Refunds will be processed 30 days after the meeting.  
Fax number: 703-998-8893  
E-mail: admin@thyroid.org

### FOR FURTHER INFORMATION

Confirmation of Registration:  
678-341-3056

Fax Registration: 678-341-3081

CME Certificates (post-meeting)  
617-638-4605 or [www.bu.edu/cme](http://www.bu.edu/cme)

Other Course Information:  
703-998-8890  
[admin@thyroid.org](mailto:admin@thyroid.org)

The ATA national headquarters is at 6066 Leesburg Pike, Suite 550, Falls Church, VA 22041.

The AACE national headquarters is at 1000 Riverside Ave.; Suite 205, Jacksonville, FL 32204.

# Meeting Registration Form

**REGISTER ONLINE** at the secure ATA web site [www.thyroid.org](http://www.thyroid.org)  
**or by mail or fax using this form.**

All requested information must be provided to process registration.

First name \_\_\_\_\_ Last name \_\_\_\_\_

Nickname for badge \_\_\_\_\_ MD PhD MD, PhD DO RN Other: \_\_\_\_\_  
Professional degree(s) (please circle one): Title \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province Zip code + 4 \_\_\_\_\_

If outside the U.S., country/city \_\_\_\_\_ Country \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail address \_\_\_\_\_

Special Needs. (Dietary, accessibility, etc.) \_\_\_\_\_

## Registration Fees

(Please circle applicable fees.)

	Discounted (received by March 15)	Full Fee (received after March 15)
(D) Physician/Scientist .....	\$275 .....	\$325 .....
(G) Government/Public Health Official.....	\$275 .....	\$325 .....
(F) Residents*/Fellows*/Allied Health Professional .....	\$125 .....	\$175 .....
(P) Press.....	\$0 .....	\$0 .....

\*With verification of status. Please fax a letter from your program director to 703-998-8893 or by e-mail to [admin@thyroid.org](mailto:admin@thyroid.org).

- |   |   |   |
|---|---|---|
| <p>1. I require a CME certificate for my attendance at this meeting.<br/><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If pre-registered you can complete the evaluation and CME form and receive your CME certificate as you depart the meeting.</p> | <p>2. I consider myself primarily (please list one): _____<br/>a. Clinician b. Educator<br/>c. Scientist<br/>d. Other: _____</p> <p>3. My work is best described as (please list one): _____<br/>a. Adult endocrinology<br/>b. Basic science<br/>c. Pediatric endocrinology<br/>d. Internal medicine<br/>e. Family Medicine<br/>f. Other: _____</p> | <p>4. My place of work is (please list one): _____<br/>a. Academic<br/>b. Private practice<br/>c. Administration<br/>d. Hospital<br/>e. Government/military<br/>f. Corporate/industry<br/>g. Managed care</p> <p>5. What do you hope to learn by attending this course?<br/>_____<br/>_____</p> |
|---|---|---|

## Payment Information:

**Check or Money Order** (payable to the American Thyroid Association in U.S. dollars drawn on a U.S. bank) Amount enclosed: \_\_\_\_\_

**Credit Card:**  MasterCard  VISA  American Express

Card number \_\_\_\_\_ Expiration date (month/year) \_\_\_\_\_

Print cardholder's name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

**In case of emergency, please contact:**

Name \_\_\_\_\_

Daytime Phone \_\_\_\_\_ Evening Phone \_\_\_\_\_

Cell Phone \_\_\_\_\_

**Please keep a copy of this form.**



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