

Acoustical Society of America 142nd Meeting Press Luncheon News Release



USING SOUND TO TREAT CANCER, THE STEEL DRUM'S NEW COUSIN, AND PROTECTING FLORIDA MANATEES AT ACOUSTICS PRESS LUNCHEON AND WEB-BASED PRESS ROOM

FOR IMMEDIATE RELEASE

Melville, New York, November 27, 2001

Researchers will present some of the newest and most interesting findings in the science of sound during a press luncheon at next week's Acoustical Society of America (ASA) meeting in Fort Lauderdale.

The luncheon will be held on Tuesday, December 4 from 11:30 a.m.-1:30 p.m. in Room 209 at the Greater Fort Lauderdale-Broward County Convention Center, 950 Eisenhower Blvd, Ft. Lauderdale, FL (954-765-5900). The speakers and topics are listed below. The entire acoustics meeting takes place from Dec. 3-7, 2001. Reporters who wish to attend the luncheon, the meeting, or both, should fill out the reply form at the end of this release or contact Ben Stein (301-209-3091, bstein@aip.org).

Even if you are out of town, the ASA World Wide Press Room (<http://www.acoustics.org/press>) contains over a dozen lay language papers with detailed information on some of the most exciting papers to be presented at the meeting. The website also includes the general press release for the meeting, and a searchable database of all meeting abstracts.

The following text describes the press luncheon topics, and some examples of lay language papers that are already available online.

PRESS LUNCHEON
Acoustical Society of America Meeting
Room 209
Greater Fort Lauderdale-Broward County Convention Center
Tuesday, December 4, 2001
11:30 AM - 1:30 PM

● **TREATING CANCER WITH SOUND**

Traditional methods for eliminating tumors either require invasive surgery, chemotherapy drugs which can have potential side effects, or ionizing radiation such as x-rays which can damage the genetic material in healthy cells. Narendra T. Sanghvi (317-541-1580, nsanghvi@focus-surgery.com) of Focus Surgery (www.focus-surgery.com) in Indianapolis and colleagues will discuss a potentially safer alternative: the use of ultrasound to destroy tumors. Sanghvi will discuss Sonoblate, a device that combines ultrasound imaging and treatment of cancer tissue to burn away prostate tumors while avoiding healthy surrounding tissue. The device has just passed Phase III human clinical trials in the US and has received approval for various medical uses from Japan and British health agencies. Also scheduled to speak is Dr. Feng Wu of the Institute of Ultrasound Engineering in Medicine at Chongqing Medical University in China. Dr. Wu is one of the world's most knowledgeable experts in the use of ultrasound to treat tumors. This topic will be discussed in session 2aBB of the meeting (Tuesday morning, Dec. 4)

● **STEELPAN SCIENCE AND THE HANG DRUM**

Steelpanns built of hammered portions of forty-gallon oil drums are important instruments in contemporary Caribbean music. Thomas D. Rossing (Northern Illinois University, rossing@physics.niu.edu, 815-753-6493) will discuss the body of existing steelpan science and new analyses of steelpan vibrating modes. Brian Copeland of the University of the West Indies will delve into the intricacies of steelpan manufacturing. Percussionist Barry Larkin (Iowa State University) will be on hand to demonstrate a new cousin of the steel drum, called the HANG. Session 2pMU (Tuesday, Dec. 4, 1:00 PM) is dedicated to Caribbean musical instruments and traditions generally, with particular emphasis on the steelpan. Lay-language papers on these topics can be found at <http://www.acoustics.org/press/142nd/Copeland.html> and <http://www.acoustics.org/press/142nd/rossing.html>

● PROTECTING FLORIDA MANATEES

Appearing on Earth approximately 50 million years ago, manatees are aquatic mammals with two front flippers and an oval tail. This endangered species is found in warm coastal waters, such as Florida. Manatees are particularly susceptible to collisions with boats. Studying the underwater hearing abilities and acoustical environment of Florida manatees, Edmund R. Gerstein (gerstein2@aol.com) of Leviathan Legacy, a Florida-based consulting firm, and his colleagues have concluded that the sounds of slower-moving boats are particularly difficult for Florida manatees to detect. These sounds are often obscured by the noises of snapping shrimp and more distant fast-moving boats. The information from this study, Gerstein says, can help researchers to design effective low-intensity alarms to alert manatees of oncoming boats (4aAB5, Thursday, Dec. 6, 9:25 a.m). A laypaper on this topic, with videos, is posted at <http://www.acoustics.org/press/142nd/gerstein2.html>

● STOPPING INTERNAL BLEEDING WITHOUT SURGERY

It may sound like a device out of Star Trek, but researchers at the University of Washington's Applied Physics Laboratory are showing that stopping internal bleeding is possible without cutting open a patient. Shahram Vaezy (adasi@u.washington.edu, 206-543-8533) will present the latest developments in the use of high-intensity focused ultrasound (HIFU) as an effective method of hemostasis (stopping bleeding). In recent experimental studies, Vaezy and his colleagues employed a combination of conventional imaging and Doppler ultrasound to locate internal bleeding, and then used HIFU to stop the bleeding. HIFU generates a lot of heat very quickly (70 degrees Celsius in less than a second), which causes biological tissues to shrink and fuse together, and small blood vessels to collapse---halting the bleeding. Unlike current techniques that work only on visible bleeding, such as electrically produced heat or manual suturing, Vaezy says HIFU can be delivered to bleeding sites deep in the tissue and does not require an incision. The researchers believe HIFU could be used in surgery and pre-hospital settings for treating bleeding in both trauma and elective surgery patients. Vaezy and his colleagues are also working on acoustic hemostasis devices that can stop bleeding in solid organs like the spleen, where current hemostasis techniques are not effective. (Paper 2aBB4, Tuesday, December 4, 9:05 a.m.) (3pSP1)

FULL LAY LANGUAGE PAPER LIST:

http://www.acoustics.org/press/142nd/lay_lang.html

SOME HIGHLIGHTS:

● [Tiny Bubbles for Better Health](#)

(Includes computer animations)

Evan Unger

ImaRx Therapeutics, Inc.

<http://www.acoustics.org/press/142nd/unger.html>

● ["Quiet, Please!" Says the Fetus](#)

Mostafa Fatemi

Mayo Foundation

and colleagues

<http://www.acoustics.org/press/142nd/Fatemi.html>

● [New Treatment for Tinnitus](#)

Martin L. Lenhardt

Virginia Commonwealth University

and colleagues

<http://www.acoustics.org/press/142nd/lenhardt.html>

● [Songlike Vocalizations from the Sumatran Rhinoceros](#)

(includes sounds)

Elizabeth von Muggenthaler

Fauna Communications

and colleagues

<http://www.acoustics.org/press/142nd/vonmuggenthaler.html>

● [Perception of Sound by Goldfish](#)

Richard Fay

Parmly Hearing Institute

Loyola University of Chicag

<http://www.acoustics.org/press/142nd/fay.html>

● [Classroom Acoustics in Urban and Suburban Schools](#)

John Erdreich

Ostergaard Acoustical Associates

<http://www.acoustics.org/press/142nd/Erdreich.html>

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