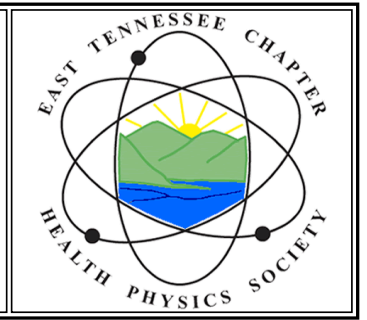


ETCHPS Newsletter

September 2007



2007 Chapter Officers

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Welcome to the September Newsletter



June Program Meeting

The East Tennessee Chapter of the Health Physics Society held its monthly program meeting on Tuesday, June 19, 2007 at the Sagebrush Restaurant in Oak Ridge, Tennessee. Over 35 ETCHPS members and guests were in attendance. The speaker was Dr. Jerry Eisele, Director of the Comparative Animal Research Laboratory (also know as CARL or the Dairy Farm) operated by the University of Tennessee. In addition to sharing remembrances, Dr. Eisele discussed the origins of the Dairy Farm, described the research facilities, and emphasized the contribution that CARL provided towards understanding biological effects of ionizing radiation. The presentation was highlighted with over 50 historical photographs.

Topics addressed during the presentation included:

- The Comparative Animal Research Laboratory was created in response to a wind shift following the Alamogordo nuclear test which carried fallout outside the test range. Contaminated livestock were collected and transported to east Tennessee due to the combination of available land and collaborative research capabilities between ORNL and the University of Tennessee.
- CARL research facilities included a low dose rate irradiation facility, a variable dose rate irradiation facility, surgical suites, necropsy labs, biochemical labs, feed mills, and mechanical shops.
- Research activities involved plants and many animal species including cattle, horses, burros, swine, donkeys, dogs, rabbits, sheep, guinea pigs, mice, and fowl.
- Many of the long term effects of radiation exposure described by Robley Evans and A.P. Casarett (Radiation Biology) were based on experiments and observations made at CARL.
- Specific studies and unique capabilities included:
 - The effects on dogs following feeding on exposed animal tissue.
 - Lifetime follow-up studies on exposed animals.
 - Sub-lethal irradiation induced fatigue (studied using paired ponies).
 - Effects of in-utero irradiation.
 - Organ transplantation (kidney transplanted to neck of cow to aid follow-up observations).
 - Pathogen free animals (delivered by Caesarian Section in a glove box).
 - One-half body irradiations (to study radiation burns).
 - Chromosome effect studies (effects compared between feral boars and agriculture swine).
 - CARL Research extended beyond radiation effects and included a notable investigation of animal feed contaminated with polybrominated biphenyl (PBB) fire retardant.

Dr. Eisele also reviewed the events associated with an accidental human exposure at the variable dose rate facility that resulted in an estimated acute whole body dose equivalent of 360 rem. An accident investigation determined that human error allowed a technician to enter the facility during a plant irradiation study while the source was exposed. Dr. Eisele concluded his talk with a scenic photograph of a snow covered Freel's Cabin – which still remains on the grounds of the Dairy Farm. Dr. Eisele was thanked for his presentation and the meeting was adjourned.

August Program Meeting

The East Tennessee Chapter of the Health Physics Society held its monthly program meeting on Tuesday, August 21, 2007 at the Oak Ridge Public Library in Oak Ridge, Tennessee. Approximately 20 ETCHPS members and guests were in attendance. The speaker was Dr. Doran Christensen, Associate Director and Staff Physician of REAC/TS. Dr. Christensen provided an overview of the mission and services provided by REAC/TS. Throughout his presentation Dr. Christensen repeatedly emphasized the need to improve communications between health care providers and radiation protection professionals in response radiological emergencies. He noted that the health physics resources available to REAC/TS are atypical and that the majority of U.S. health care providers are essentially untrained with respect to contamination control, radiological units, dosimetry, and radiation health effects.

Key topics of Dr. Christensen's presentation included the following:

- REAC/TS (Radiation Emergency Assistance Center/Training Site) is operated by the Oak Ridge Institute for Science and Education (ORISE) for the U.S. Department of Energy and specifically for the National Nuclear Security Administration.
- REAC/TS provides 24/7 deployment capabilities to respond to radiological incidents anywhere in the world.
- REAC/TS provides advice and consultation on radiation emergencies.
- REAC/TS response time is 4 hours "Wheels Up" within the United States and 6 hours internationally.
- REAC/TS provides Cytogenetic Biodosimetry consisting of the following five steps:
 - Cell culture setup.
 - Cell culture harvest.
 - Chromosome staining.
 - Microscopic analysis.
 - Dicentric scoring.
- REAC/TS is a provider of therapeutic drug countermeasures to treat radiation incident victims.
- Calcium and Zinc Diethylenetriaminepentaacetic acid (DTPA).
- Prussian Blue.
- REAC/TS provides several professional and technical training classes for radiation protection and health care professionals.
- REAC/TS has developed a patient treatment algorithm (see attachment) for use by health care professionals when responding to radiological events.

Dr. Christensen was thanked for his presentation and the meeting was adjourned.

Prepared by: David A. McLaughlin
ETCHPS Secretary-Elect

The Annual Picnic

The annual ETCHPS Picnic was held on August 30th. Unfortunately, there was a poor turnout which we believe was due to rain earlier in the day. The food was great! John Frazier won the Chapter Challenge - take a look at this year's [questions and answers](#).

Upcoming ETCHPS Meetings

October 23 , 2007 -

Speaker will be Bill Wilcox. He will discuss the historical preservation at K-25.

The location is Mancino's Pizza and Grinders at the intersection of Ceder Bluff and Middlebrook Pike. Social will begin at 5:30, food will be around by 6:00, and the presentation will follow.

November 13 , 2007 -

Speaker will be Mike Mobely. He will discuss waste management and the southern compact.

Check back soon for the location.

December 11 , 2007 -

The annual [vendor's meeting](#) will be held at Rothchild's catering at Baron's Place. Click on the link for more details. Please take a few minutes to read the invitation and fill out a registration form.

Members can pay using Paypal this year. Just follow this [Paypal link](#) and enter etchps@yahoo.com in the 'To:' entry field and your email in the 'From:' field. You do need a Paypal account but it is fast and easy to create one. Please enter Vendor's meeting in the subject entry field and the number of guests (and if possible the names) that will be attending.

January 15, 2007 -

Speaker will be Dick Toohey, president-elect of the HPS.

Safety Tip for the Month

Refer to the picture above.....beware of the Big Orange sea. Just kidding - Go Vols!

Dues Information (Paypal is Now Active)

The chapter requests that all dues be paid by March 31st of each year - please send them in immediately if you are past due. If you are unsure if you have paid your dues, please email the chapter Secretary [Erika Bailey](#).

The chapter can now accept dues with Paypal. Just follow this [Paypal link](#) and login to your paypal account. If you do not have a Paypal account it is very easy to create one. As soon as you login using the link above, there will be a 'Pay Now' button.

If you still wish to pay dues via check, please make your check payable to ETCHPS and address your envelope to:

ETCHPS
P.O. Box 7006
Oak Ridge, TN 37831-7006

Membership fees are as follows:

| | |
|-----------------|---------|
| Plenary | \$15.00 |
| Fellow | \$15.00 |
| Student | \$ 7.50 |
| Member Emeritus | \$ 7.50 |
| Life Member | No Dues |

Thanks for your support.

Erika Bailey
ETCHPS Secretary

