

SYMPOSIUM: SCIENTIFIC ISSUES IN NONLETHAL INTERVENTIONS
SUNDAY, JUNE 11, 2006
Sponsored by Aegis
9:00am – 12:00pm
In Conjunction with the BEMS 28th Annual Meeting
Cancun, Mexico

It is clear that the fledgling area of non lethal or intermediate force intervention involving electric fields and humans is a rapidly growing and important field. It is imperative that thorough research is conducted at this relatively early stage in order to understand the scientific issues that arise when a functioning biological system is subjected to high voltage, short duration pulses. Questions that are currently being considered include:

- What exactly is the full physiological response of the system after a single and multiple high voltage pulses?
- What is the importance of the shape of the pulse?
- Are there subtle long term effects on the biological system?
- Can effective in-silico models be developed that reliably predict the biological system reaction to the pulses?

These are just a few of the questions that will be addressed by the distinguished set of speakers that will present at the symposium. Those attending will have access to some of the latest research and thinking in the field and the discussion periods will be aimed at helping refine these current questions and to identify and clarify new questions that will form the basis for follow-on research. The symposium is intended to be not only a forum for the exchange of information but is also has the aim of helping set the agenda for long term research.

AGENDA

09:00 - 09:15

Introduction and Overview

James C. Weaver (MIT)

09:15 - 09:40

Measurements and Features of Several Device Waveforms

Stephen K. Burns (MIT)

09:40 - 10:05

Macro and Micro Issues with TASER. Control Device Safety

Mark Kroll and Dorin Panescu (Taser International)

10:05 - 10:30

Candidate Mechanisms for HEMI

Robert Walter (Hektoen Foundation for Medical Research)

10:30 - 10:55

Acute and Chronic Electrical Shock Injury to Muscle and Nerves

Raphael C. Lee (University Chicago)

10:55 - 11:20

Macrodosimetry and the Virtual Family

Wolfgang Kainz (FDA)

11:20 - 11:45

In Silico Advances: Models of Electroporation and Action Potentials

Axel Esser (MIT)

11:45 - 12:00

Summary Discussion by all Participants

NOTE: Coffee, tea etc. will be available continuously in the back of the room