

### Activity Overview

The ACMT Annual Scientific Meeting (ASM) is an opportunity for specialists in the field to gather to learn from the cutting-edge research of their peers. In addition to all the networking and social opportunities that make our events so rich with engagement, this year ACMT is piloting concurrent sessions offering more educational content than ever before! These concurrent sessions will be divided into the following topical tracks of broad interest to the Medical Toxicology community: 1) Environmental & Occupational Medicine, 2) Addiction Medicine, 3) Diversity, Equity & Inclusion, and 4) Research.

### Target Audience

This activity is designed for an audience of physicians, pharmacists and nurses.

### Learning Objectives

Upon completion of the educational activity, participants should be able to:

### FRIDAY, APRIL 12, 2024

#### Platform Session 1: Intoxication in Children of Family Members Prescribed Opioids: A Population-Based, Case-Control Study in Denmark

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#### Platform Session 2: Engineering a Carbon Monoxide Poisoning Antidote From a Bacterial Hemoprotein Carbon Monoxide Sensor

- Define the long-term ramifications of acute carbon monoxide poisoning.
- Appraise the limitations of the current management of carbon monoxide poisoning.

#### Platform Session 3: A Ten-Year Clinical Experience Utilizing a Glycerol Dehydrogenase Serum Assay for Ethylene Glycol

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#### Platform Session 4: Complications Limiting Use of Hemodialysis in Salicylate Deaths

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#### Donovan Lectureship | Groundbreaking Research from NIDA Addressing the Challenges of the Opioid Epidemic

- Describe the current state of the opioid epidemic in the U.S.
- Enumerate the many strategies that have been developed to treat opioid addiction.

#### Chemical Defense Panel: Assessing and Optimizing Local Responses

- List several medical countermeasures USAMRICD was involved with developing.
- Describe the mission of USAMRICD.
- Describe Chemical Defense activities at DHS and our collaboration with other federal partners.
- Identify the challenges a chemical incident creates and propose opportunities to enhance responding to a chemical incident.
- Describe career opportunities for medical toxicologists in government.

### 1:00-1:30 PM ET - CONCURRENT SESSIONS

#### Environmental & Occupational Medicine Track

##### Harmful Algal Blooms (HABs): What Poison Centers and Medical Toxicologists Should Know

- Identify the prominent human poisoning syndromes associated with algal toxins.
- Describe the mechanisms by which humans are exposed to toxins from harmful algal blooms.
- Identify the impacts harmful algal blooms have on human, animal, and ecosystem health.

#### Addiction Medicine Track

##### Medication for Opioid Use Disorder Trajectory Phenotypes: Development of a Risk Stratification and Prediction Framework Using Urine Toxicology and EHR Data

- Describe how urine toxicology tests can be used to develop a real-time prognostic model to forecast the treatment response of a new patient initiating medication for opioid use disorder treatment.

## **Diversity, Equity & Inclusion**

### **The Toxic Past and Present of Redlining and Racial Segregation**

- Describe the history of redlining and how the policy codified and perpetuated racial segregation in the United States.
- Analyze the effects of redlining on disparate exposure to environmental pollutants among present day residents of previously redlined neighborhoods with those of non-redlined neighborhoods.

## **Research**

### **Researchers, Do You Even R? Getting Started with Managing and Visualizing Toxicology Data in R**

- Explain how to use R for toxicology research.
- Explain how to solve some common problems with data imported into R.

## **1:40-2:10 PM ET - CONCURRENT SESSIONS**

## **Environmental & Occupational Medicine**

### **Mad About Manganese: Medical Toxicologists and Water Quality Standards**

- Plan a water quality analysis.
- Differentiate between the various points of departure and their meaning.

## **Addiction Medicine**

### **The Public Health Impact of Over-The-Counter Naloxone & Nalmefene**

- Explore the potential public health benefit of making naloxone over the counter by evaluating the impact of naloxone access laws on naloxone distribution and opioid-related mortality.
- Differentiate the pharmacokinetic properties of naloxone and nalmefene and postulate how these properties may affect patients with opioid dependence.

## **Diversity, Equity & Inclusion**

### **The Good, Bad and Ugly: Drug Testing in Liver Transplant Evaluations**

- Define the frequency of liver transplants, its indications, and the absolute/relative contraindications.
- Describe substance use screening during liver transplant candidacy evaluations.

## **Research**

### **Translational Approach to Biomarker and Therapeutic Development in Environmental Toxicology**

- Identify barriers to translational research.

## **2:20-2:50 PM ET - CONCURRENT SESSIONS**

## **Environmental & Occupational Medicine**

### **Do You Really Know IARC? Why IARC Determinations Aren't Clear Cut, and When They Result in Controversy**

- Recognize the difference between cancer hazard and cancer risk and how this is incorporated into IARC determinations.
- Describe data used to make an IARC Group 1 determination.

## **Addiction Medicine**

### **Psilocybin and the Treatment of Substance Use Disorder**

- Identify different types of psychedelics and their basic pharmacology.
- Evaluate research to date on psychedelic-assisted therapy for the treatment of substance use disorder.

## **Diversity, Equity & Inclusion**

### **Toxicology Practice and Gender and Sexual Minorities**

- Raise personal awareness of gender and sexual minorities.
- Explore the intersection of gender and sexual minorities and toxicology practice.

## **Research**

### **Translational Research from Laboratory Bench to Clinical Practice: Digoxin Poisoning**

- Rationalize the use of digoxin antibody (digoxin-Fab) in digoxin poisoning.
- Change of clinical guidelines based on research evidence for digoxin poisoning.

## 3:00-3:30/45 PM ET - CONCURRENT SESSIONS

### Environmental & Occupational Medicine

#### Testing and Counseling on Polyfluoroalkyl Substances (PFAS) exposure in the Medical Toxicology Clinic

- Discuss an approach to counseling patients regarding clinical testing for PFAS in the Medical Toxicology Clinic.

### Addiction Medicine

#### Annual Review of Medical Toxicology Publications - Articles You May Have Missed from 2023-2024

- Discuss articles of interest related to poisoned patients outside standard toxicology journals.
- Discuss an article related to intubation in poisoned patients.
- Discuss an article related to clinical management adjustment based on an EEG in poisoned patients.

### Diversity, Equity & Inclusion

#### Trauma-Informed Care for the Medical Toxicologist

- Develop strategies on how to implement the six trauma-informed care principles in the care of a patient.
- Analyze barriers in providing trauma-informed care in your clinical environment.

### Research

#### Anatomy of Authorship

- Define authorship.
- Explain accountability for a paper.

## SATURDAY, APRIL 13, 2024

#### Platform Session 1: Will Artificial Intelligence Replace the Medical Toxicologist? Pediatric Referral Guidelines Generated by GPT-4.

- Describe Chat GPT-4 and its use in medicine.
- Discuss how artificial intelligence can be used by medical toxicologists.

#### Platform Session 2: Jarvis: A Software Tool for Automatically Identifying Substances and Doses From Online Commentary

- Identify how named entity recognition can identify xenobiotics from unstructured text.
- Identify how precision and recall evaluate algorithm performance.

#### Platform Session 3: Analysis of Acute Hypersensitivity Reactions by Antivenom Type by Geographic Location in the North American Snake Bite Registry

- Explain the theoretical risk of acute hypersensitivity reactions to FabAV vs Fab2AV and how they may vary according to geographic location.

#### Platform Session 4: Comparison of the Efficacy, Safety, and Incidences of Acute Adverse Reactions in Two Antivenoms for Eastern Copperhead (*Agkistrodon contortrix*) Envenomations in Southeast Texas

- Explain the structural differences between Anavip (Fab2AV) and Crofab (FabAV).
- Identify the situations in which one antivenom may be preferential to the other.

#### Toxicological Considerations of the East Palestine, Ohio Train Derailment

- Describe the role of medical toxicologist in a train derailment/disaster scenario.
- Describe Emergent Event Exposure Levels and how they are relevant to medical toxicologists.

#### ACMT Career Achievement Award | Medical Toxicology at the FDA: A Structured Public Health Career

- Review some medical toxicology consults at the FDA.
- Describe the biological plausibility evaluation of safety signals at the FDA.
- Review research opportunities at the FDA.

#### AACT Session | Don't Have a Meltdown: What Toxicologists Need to Know About Radiation Exposure and Contamination

- Describe the basics of radiation exposure and contamination and the relevance to medical and clinical toxicologists.
- Describe the media portrayal about radiation exposure and/or contamination and best practices for understanding terminology and units.

## MEDTOX CASE PANEL

#### Case 1: An Impossible Rescue Mission: Management of a Severe Case of Chronic Methotrexate Toxicity in the Setting of End Stage Renal Failure

- Review the management intricacies of complicated case of methotrexate toxicity.

### **Case 2: Massive Sodium Nitrite Ingestion with Cardiac Arrest and Organ Transplantation**

- Manage the resuscitation of the critically-ill methemoglobinemia patient.
- Assess the viability of organs for donation following massive ingestion of sodium nitrite.

### **Case 3: Aspirin in Alaska**

- Develop a risk/benefit analysis for intubating salicylate-toxic patients.
- Identify unique challenges for salicylate/opiate co-ingestion.

**SUNDAY, APRIL 14, 2024**

### **Lightning Oral Session 1: Adequacy and Characteristics of N-Acetylcysteine Treatment in Acetaminophen Poisonings Recommended by a Poison Center, a Medical Toxicologist, or Another Physician: A Comparative Study**

- Recognize and appraise the advantages of professional toxicological consultation in acute acetaminophen poisoning.

### **Lightning Oral Session 2: Octreotide Administration Methods in Sulfonylurea Poisoning: A Retrospective Chart Review Review indications for octreotide use.**

- Describe clinical outcomes associated with different routes of octreotide administration after sulfonylurea exposure.

### **Lightning Oral Session 3: Calcium Precipitation in Bedside Calcium Gel Mixing for Dermal Hydrofluoric Acid Exposure Treatment**

- Review the effectiveness of bedside mixing of calcium-containing gels in emergency departments.

### **Lightning Oral Session 4: Perspectives From Individuals With Alcohol Use Disorder (AUD) on Ingestible Electronic Systems to Measure Adherence to Medications for AUD**

- Discuss perceptions individuals with alcohol use disorder have towards a digital pill system.
- Recognize barriers to medication adherence for individuals with alcohol use disorder.

### **Lightning Oral Session 5: Substance and Treatment Experience and Motivation to Change Reported During Peer Recovery Intervention in the Emergency Department**

- Identify differences in characteristics between individuals who presented for drug overdose and those who presented for an unrelated complaint but screened positive for drug use.

### **Lightning Oral Session 6: Experience of a Medical Toxicology Clinic with Follow-Up of Rattlesnake Envenomation Patients: A Focus on Delayed Complications**

- Identify potential adverse outcomes in rattlesnake envenomated patients.
- Develop new protocol for assessing adverse outcomes in rattlesnake envenomated patients.

### **Lightning Oral Session 7: Advanced Virtual Support for Operational Forces (ADVISOR) Toxicology Service: Retrospective Review of Operational Military-Related Managed with Virtual Toxicology Consultation**

- Evaluate utility of virtual toxicology support in the austere environment.

## **INTERNATIONAL PANEL**

### **Chlorine Gas Incident in Sohar: Lessons Learned (MENATOX)**

- Determine early signs and symptoms of irritant gases exposure.
- Discuss the Methods of decontamination and management approach.

### **Asian vs. Australian Snakebite: An Evolutionary Divide (APAMT)**

- Identify the similarities between snakes and snake envenomation across continents.
- Describe the key issues for snakebite research.

### **Drug Toxicity from Pharmaceutical Production Processes (EAPCCT)**

- Recognize drug toxicities from pharmaceutical production processes especially in relation to contaminants of such processes including the relevance of nitrosamine contamination in the recall of various pharmaceuticals.
- Recognize the importance of Poison Centres also in relation to drug toxicities from pharmaceutical production processes.

### **The Odyssey of Antidote Stockpiling: The Case of The Leiurus Hebraeus Scorpion and Beyond (IST)**

- Recognize and appraise the challenges, limitations and key-points of antidote stockpiling.
- Describe the characteristics of Leiurus Hebraeus Scorpion envenomation – clinical manifestations and treatment.

## The Challenges of Envenomations in Mexico (RETOMEX)

- Describe the epidemiology of envenomations in Mexico.
- Share the advances in the treatment of envenomations in Mexico.

## ASAM Panel | NIDA Research & ED Experience with XR Injectable Buprenorphine

- Recognize National Institutes of Health, National Institute on Drug Abuse research initiatives.
- Describe the benefits of 7 day extended-release injectable buprenorphine for patients with OUD in the Emergency Department.

## Achieving Health Equity in the Field of Substance Use: A Public Health Approach

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### Criteria for Success

Statements of credit will be awarded based on the participant's attendance. A statement of credit will be available upon completion of an online evaluation/claim credit form available at:

<https://education.acmt.net/p/2024-annual-meeting-CE>

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If you have questions about this CE activity, please contact AKH Inc at [JGoldman@akhcme.com](mailto:JGoldman@akhcme.com).



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