



AMERICAN CHEMICAL SOCIETY KENTUCKY LAKE SECTION

February 2018 Kentucky Lake Section Meeting

@

Fresh Market Restaurant
2255 East Wood St, Paris, TN 38242

Thursday, February 22nd, 2018
Dinner @ 6:00 pm, Presentation @ 7:00 pm

Dinner: Choice of Pork Chops, Grilled Chicken, Pasta Primavera
The price is \$10 (Students \$5)

Program: Are Illicit Drugs Consumed More During Celebrations?

Dr. Bikram Subedi, Assistant Professor of Analytical Chemistry
Murray State University

Science Center: Bring your kids for fun with Magnetism!

Comments from the Chair

Greetings KLS Members!

February may be the shortest month in the calendar, but there's double the opportunity for you to meet and mingle with other chemistry enthusiasts this month!

For our regularly scheduled meeting we'll be hearing from Dr. Bikram Subedi, professor at Murray State University. Dr. Subedi specializes in the development of analytical methods to analyze chemical contaminants in water and will discuss the application of these methods toward quantifying illicit drug use within communities.

The following week, on Tuesday February 27th, an ACS "program-in-a-box" event *Opioids: Fighting Addiction With Chemistry* will take place. This topic is incredibly timely and the program promises to be engaging and informative. Dr. Rebecca Brown will be hosting at WKTCC in Paducah KY, and Drs. Abigail Shelton and Robbie Montgomery will be hosting at UTM in Martin TN. If you would like to attend, please contact one of them for more details.

Kind regards,
Genessa

KLS-ACS 2018 Officers

Chair

Genessa Smith
UT-Martin
Gsmith65@utm.edu

Chair Elect

Kevin Revell
Murray State
Krevell@murraystate.edu

Past Chair

Phillip Shelton
UT-Martin
Pshelto2@utm.edu

Secretary/Treasurer

Rebecca Brown
WKCTC
rebecca.brown@kctcs.edu

Councilor

Robbie Montgomery
UT-Martin
rmontgomery@utm.edu

Alternate Councilor

Bommanna Loganathan
Murray State
bloganathan@murraystate.edu

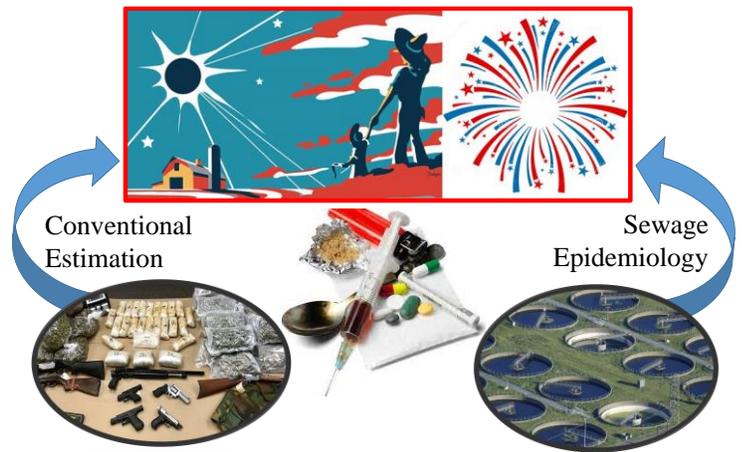
KLS-ACS Web Page

<http://kentuckylake.sites.acs.org/>

Abstract

Are illicit drugs consumed more during celebrations?

Conventionally, the consumption rate of drugs in a community is determined based on self-reported surveys, overdose/toxicological reports, and drug-related crime statistics. Cost-intensive conventional methods are, therefore, prone to underestimate community use of drugs. An analytical method was developed capable of determining trace level residues of drugs in wastewater. Drug's residues were utilized - *Sewage Epidemiology* - to determine the consumption rate of drugs during special events in Western Kentucky. Per-capita consumption of methamphetamine and amphetamine were the highest ever reported in the USA. While the opioid epidemic has been declared as a national public health emergency, codeine and hydrocodone were the most consumed prescription opioids. The discharged wastewater was also found to be a source of several neuropsychiatric and illicit drugs into the receiving creek and river.



Speaker Bio



Dr. Bikram Subedi received his M.S. at Tribhuvan University in Kathmandu, Nepal, then his Ph.D. at Baylor University. Prior to joining Murray State University, Dr. Subedi worked as a Senior Research Scientist at Lancaster Eurofins Laboratory at Eli Lilly and as a Visiting Assistant Professor at Wabash College. Dr. Subedi is interested in improving students' learning curiosity by incorporating the real-world applications of newly developed analytical methods in undergraduate and graduate teaching. Overall, Dr. Subedi is refining his teaching capabilities and expanding research expertise at Murray State University.