

# PRESENTERS

## A Symposium on the Potential of Wastewater Testing for Public Health and Safety

### KEYNOTE SPEAKER



**J.B. Wogan**, *Governing Magazine*

**J.B. Wogan** is a policy journalist with experience covering every level of U.S. government, from small town city halls to federal agencies in the Obama administration. He currently covers antipoverty programs as part of his twice-monthly human services newsletter for *Governing* magazine. He is especially interested in how research and data can inform policymakers and translate into better governance. In 2016, he co-wrote a book with Brian Elms about Denver's Peak Academy, an in-house training program that arms city workers with the skills to save time and money while delivering better services to citizens. He also teaches a master's level course on policy communications at the Johns Hopkins Bloomberg School of Public Health. He holds an M.P.P. degree from Johns Hopkins University.

### FACILITATOR



**Jon Glaudemans**, United Rheumatology

**Jon Glaudemans** has spent 35 years working in health care, including leadership roles with the U.S. Office of Management and Budget, Aetna, Avalere, and Ascension. He has authored or co-authored many articles and reports on a range of topics including, of immediate relevance, the safe disposal of controlled substances. He is currently the CEO of United Rheumatology, which supports independent rheumatology practices. He holds an M.P.A. degree from Princeton University and a B.S. degree from the Massachusetts Institute of Technology.

### PROJECT DIRECTOR



**Aparna Keshaviah**, Mathematica Policy Research

**Aparna Keshaviah** is an applied statistician at Mathematica with over 15 years of experience leading the design and analysis of clinical trials to evaluate mental health treatments, health screening methods, and cancer therapeutics. Her work spans the areas of public health, environmental health, military health, and nutrition, and her expertise in statistical modeling extends to visualization of model outputs and quality control of the data feeding into models. She is widely published in journals such as the *New England Journal of Medicine*, *JAMA Psychiatry*, and *Environmetrics*, and contributed to the latest version of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*. She holds an M.S. degree in biostatistics from the Harvard School of Public Health.

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## INFORMATION GAPS THAT INHIBIT EFFECTIVE POLICY DEVELOPMENT

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**Terry Zobeck**, Office of National Drug Control Policy (ONDCP)

**Terry Zobeck** is the acting deputy director of the Office of Policy, Research and Budget within ONDCP, an agency in the Executive Office of the President that leads and coordinates the nation's efforts to reduce drug use and alleviate its consequences. He oversees the production, budgeting, and performance assessment of the *National Drug Control Strategy*, the administration's blueprint for addressing this goal through international, interdiction, domestic law enforcement, prevention, and treatment activities. He is also responsible for policy implementation, assessment, and budget formulation in the areas of public health (prevention, treatment, and recovery), public safety, and international policy, and for research associated with guiding these activities. He has been with ONDCP since 1996. Before joining the federal government, he was a substance abuse researcher for 13 years in the private sector, managing contracts with federal clients including ONDCP, the National Institute on Drug Abuse (NIDA), the National Institute on Alcohol Abuse and Alcoholism, and the Substance Abuse and Mental Health Services Administration (SAMHSA). He holds a Ph.D. from the University of Tennessee.



**Christopher M. Jones**, Office of the Assistant Secretary for Planning and Evaluation (ASPE)

**Christopher M. Jones** currently serves as acting associate deputy assistant secretary for science and data policy at ASPE, in the U.S. Department of Health and Human Services. During his career, he has served as senior public health advisor to the ONDCP, led the Food and Drug Administration's drug safety and risk communication team, and served on the science team in the Centers for Disease Control and Prevention's (CDC) Strategic National Stockpile. He is a nationally recognized expert on opioid misuse and overdose and has authored more than 50 peer-reviewed publications on the topic. Chris received his Pharm.D. from Mercer University, his M.P.H. degree from New York Medical College, and is currently completing his D.P.H. in health policy at The George Washington University.

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## PUBLIC HEALTH APPLICATIONS OF WASTEWATER TESTING

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**Daniel Burgard**, University of Puget Sound

**Daniel Burgard**, associate professor and chair of chemistry at the University of Puget Sound, is a researcher and teacher whose primary work involves environmental chemical analysis, including measuring municipal wastewater content to determine drug levels and trends in drug consumption. In his current grant from the NIDA in the National Institutes of Health, he is analyzing wastewater from two pilot wastewater treatment facilities in Washington State to investigate the effects of cannabis legalization on cannabis consumption. His work on wastewater-based epidemiology has been published in scientific peer-reviewed articles and in the popular media, including public radio's *Marketplace* and the Discovery Channel's *Daily Planet*. He holds a Ph.D. from the University of Denver.



**Caleb Banta-Green**, University of Washington

**Caleb Banta-Green** is a principal research scientist at the Alcohol and Drug Abuse Institute and an affiliate associate professor at the School of Public Health at the University of Washington. He formerly served as senior science advisor at ONDCP. He has been the Seattle representative to NIDA's drug epidemiology work group since 2001. He has expertise in using multiple data sources for the surveillance of opioids and other drugs of abuse. In addition, he conducts extensive research on opioid misuse, opioid use disorder, and opioid overdose. He first published wastewater-based research on drug epidemiology in 2009. He holds a Ph.D., M.P.H., and M.S.W. from the University of Washington.



**Kevin Bisceglia, Hofstra University**

**Kevin Bisceglia** is an assistant professor of chemistry at Hofstra University, where he teaches and conducts research in analytical and environmental chemistry. He specializes in characterizing the occurrence and fate of chemical contaminants in natural and engineered environments, and first published research on the wastewater-based monitoring of illicit drugs in 2010. Most recently, he has been involved in studies to evaluate whether wastewater monitoring can play a role in tracking antibiotic use and resistance, and in developing gas chromatography/mass spectrometry-based methods to enable municipal and contract labs to begin routinely testing wastewater for illicit drugs. He holds a B.S. and M.E. in environmental engineering from Manhattan College, an advanced certificate in adolescent education from Bard College, and a Ph.D. in environmental engineering and chemistry from Johns Hopkins University.



**Katrice Lippa, National Institute of Standards and Technology (NIST)**

**Katrice Lippa** has extensive experience in trace-level environmental organic measurement techniques (chromatography-mass spectrometry) and quantitative nuclear magnetic resonance techniques for the characterization of pure substances and organic constituents in biological and natural matrices. Katrice presently serves as group leader for the Organic Chemical Measurement Science Group at NIST. The group develops and promotes standard reference materials and data products for organic species in a range of project areas (including clinical, metabolomics, nutritional assessment, chemical manufacturing, and forensics); maintains high resolution mass spectrometry, enantioselective, and multidimensional separation procedures; and has vibrational and nuclear magnetic resonance spectroscopy facilities and expertise for analyses at trace and ultratrace concentration levels. The group also provides advice and measurement services to other government agencies (federal and state), scientific organizations, and American industry; and interacts with international standards organizations and other National Metrology Institutes to establish comparable measurement capabilities. She holds a Ph.D. in environmental chemistry from Johns Hopkins University.



**Moira O'Brien, NIDA**

**Moira O'Brien** is a health scientist administrator and serves as NIDA project scientist for the National Drug Early Warning System Cooperative Agreement, awarded in 2014. She also serves as program official for research grants focusing on prescription drug abuse epidemiology, grants to examine current and emerging drug abuse trends, and epidemiology-oriented grants to awardees who use social media in their work. During her time at NIDA, she has been responsible for developing and collaborating on a number of international activities in the area of epidemiology, including training, research development, and the promotion of methods and mechanisms for the collection and sharing of internationally comparable data. She holds an M.Phil. in anthropology and epidemiology from Yale University.

## **KNOWLEDGE GAPS IN TREATMENT OF OPIOID AND OTHER SUBSTANCE ABUSE**

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**Melinda Campopiano, SAMHSA**

**Melinda Campopiano** is chief medical officer of the Center for Substance Abuse Treatment, which is part of SAMHSA. Her activities have included development of SAMHSA's *Opioid Overdose Prevention Toolkit*, *Brief Guides on Medication for the Treatment of Alcohol Use Disorder*, *Clinical Use of Extended-Release Injectable Naltrexone in the Treatment of Opioid Use Disorder*, and the recent *Advisory: Sublingual and Transmucosal Buprenorphine for Opioid Use Disorder*. She served as chairperson for the Treatment and Recovery Committee of the National Heroin Taskforce in 2015. She is board certified in family medicine and addiction medicine. She provided primary care and buprenorphine services in her solo practice in Pittsburgh, and was medical director of the Western Psychiatric Institute and Clinic's Opioid Addiction Treatment Program before coming to SAMHSA. Originally from Iowa, she is a graduate of the University of Pittsburgh School of Medicine.

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**Renee M. Johnson, Johns Hopkins University**

**Renee M. Johnson** is an associate professor in the Johns Hopkins Bloomberg School of Public Health. She directs the NIDA-funded *Drug Dependence Epidemiology Training Program*, which provides enhanced training in substance use epidemiology for pre- and post-doctoral fellows. Dr. Johnson was trained in social science, epidemiology, and public health, and her research centers on understanding and addressing the mental, behavioral, and emotional health of adolescents and emerging adults. She is particularly interested in vulnerable populations, including low-income urban youth, LGBT youth, immigrants, and people exposed to trauma and violence. Her current research is focused on the epidemiology of marijuana use among adolescents and emerging adults. She is investigating trends in the prevalence of use following policy changes, changes in routes of administration for consumption (for example, smoking, ingesting edibles, vaporizing), and in the psychosocial factors associated with use. She holds M.P.H. and Ph.D. degrees from the University of North Carolina's Gillings School of Global Public Health, and conducted post-doctoral training at the Harvard T.H. Chan School of Public Health.



**Aleksandra Zgierska, American Society of Addiction Medicine (ASAM)**

**Aleksandra Zgierska** is an assistant professor in the Department of Family Medicine at the University of Wisconsin's Health Innovation Program. Her studies are rooted in her clinical practice in family medicine and addiction medicine, and focus on substance use disorders (primarily opioids) and opioid-treated chronic pain. Dr. Zgierska's current projects include a multi-center randomized clinical trial evaluating mindfulness meditation and cognitive behavioral therapy for improving health and reducing reliance on opioids in adults with opioid-treated chronic pain; implementation and evaluation of a community-based "smart policing" program, *Madison Addiction Recovery Initiative*, that will apply a "treat instead of arrest" approach to those involved in minor drug-related crimes; assessment of electronic health record-based predictors of clinician adherence to opioid prescribing guidelines; and trials of interventions designed to improve clinicians' opioid prescribing practices. She is a member of ASAM's board of directors and ASAM's Public Policy Committee. She earned M.D. and Ph.D. degrees in Warsaw, Poland, before moving to Madison, Wisconsin, where she completed a family medicine residency in 2006.

**SUCCESSES AND HURDLES IN INTERNATIONAL WASTEWATER TESTING**

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**Jochen Mueller, The University of Queensland**

**Jochen Mueller** is a professor and researcher with the Queensland Alliance for Environmental Health Sciences at the University of Queensland. His research focuses on monitoring trace organic pollutants, including pioneering work on sources, fate, monitoring techniques (including development of passive sampling techniques) and trends in human exposure to trace contaminants. He has led numerous national and international studies, including Australia's National Dioxin Program, the Brominated Flame Retardant Program, and studies to investigate bush-fire emissions. He works closely with state, federal, and international governments on the development of systematic monitoring strategies, including those designed to protect the Great Barrier Reef. In 2012, he was awarded an ARC Future Fellowship to understand changes in chemical exposure through integrative sampling, and as part of his research, he has established an extensive sample archive—the Australian Environmental Specimen Bank—to allow analyses of changes in pollutant exposure in Australia. His group has been leading research in the field of wastewater epidemiology since 2009. He holds a Ph.D. in environmental chemistry from Griffith University and an M.S. in agro-biology from the University of Hohenheim.



**Sara Castiglioni, Mario Negri Institute for Pharmacological Research**

**Sara Castiglioni** has been head of the Environmental Biomarkers Unit at the Mario Negri Institute since 2012. She worked to monitor the occurrence and fate of several classes of emerging contaminants in the environment. She has significant experience in using wastewater analysis to study substance use habits and the consumption of different substances (illicit drugs, alcohol, and tobacco). She also worked to refine the analytic approach, study its potential uncertainty factors, and develop new applications to study human exposure to environmental and food contaminants. She is involved as WP leader in a European Union Initial Training Network project ([www.sewprof-itn.eu](http://www.sewprof-itn.eu)), and she is vice chair

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of the SCORE-COST 1307 action. She studied biological sciences and, in 2006, received a Ph.D. in environmental analysis, management, and protection of biodiversity at the University of Insubria (Varese) and Mario Negri Institute (Milan). She had a doctoral fellowship at the University of New South Wales, Sydney, Australia (2004), and post-doc fellowships at the Mario Negri Institute (2007–2011).



**Frederic Been, University of Antwerp**

**Frederic Been** currently works as a researcher at the Toxicological Centre of the University of Antwerp, Belgium. His expertise focuses on analytical chemistry and associated sample preparation techniques, as well as data interpretation (chemometrics, regression analysis, Bayesian inference, and Markov Chain Monte Carlo methods). He is currently working on the analysis of illicit drugs and contaminants in environmental and biological matrices. He holds a Ph.D. in forensic science from the Ecole des Sciences Criminelles (School of Criminal Justice) of the University of Lausanne, Switzerland.



**Liesbeth Vandam, European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)**

**Liesbeth Vandam** is a scientific analyst in the scientific coordination unit of the EMCDDA. From 2006 until 2010, she worked at the Institute for International Research on Criminal Policy at Ghent University (Belgium). Since 2011, she has been responsible for coordinating the EMCDDA's technical programs by providing scientific support to the scientific director. She has published research papers on drug-related crime, drug policy, drug use among prisoners, and drug monitoring. She has also authored or co-authored EMCDDA publications in the areas of wastewater-based epidemiology, drugs and driving, and online drug markets. She holds a Ph.D. in criminology from Ghent University.

## KNOWLEDGE GAPS IN PREVENTION OF OPIOID AND OTHER SUBSTANCE ABUSE

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**Jeffrey Locke, National Governors Association (NGA)**

**Jeffrey Locke** serves as a senior policy analyst for the NGA Center for Best Practices, Homeland Security and Public Safety Division, where he focuses on issues that include criminal justice reform, public safety, juvenile justice, and heroin and prescription drug abuse. Before joining NGA, he served as a Peace Corps volunteer in Togo, West Africa, and he has worked in various capacities at the local and federal government levels. He holds a master's degree in public policy from the Harvard Kennedy School and a J.D. from Boston College Law School, and is originally from New York.



**Capt. Juan Colon, New Jersey State Police**

**Capt. Juan Colon** has a career spanning over 23 years with the New Jersey State Police, focused mainly on intelligence. He has extensive experience with street gangs and organized crime, and as an intelligence collector targeting these groups, he managed numerous informants and conducted several undercover operations. He currently serves as a drug policy advisor for the New Jersey attorney general under the Office of Drug Addiction Control. In his oversight of the state's Drug Monitoring Initiative, which he architected, he is involved in several working groups to drive state-level counter-drug initiatives. He has received several awards for his efforts and was nominated as the 2014 Trooper of the Year. He has an undergraduate degree in public administration from Fairleigh Dickerson University.



**Jeff Beeson, Washington/Baltimore High Intensity Drug Trafficking Area (W/B HIDTA) Program**

**Jeff Beeson** serves as deputy director for administration and prevention and chief of staff for the W/B HIDTA program. He supports the administration of the HIDTA program and oversees the preparation and monitoring of prevention initiatives, as well as training initiatives, to support law enforcement and public health entities throughout the region. He also manages non-HIDTA grants and contracts that support new and existing initiatives in law enforcement, criminal justice, drug treatment and prevention, homeland security, technology, and information sharing. Before joining the W/B HIDTA, Jeff served as assistant vice president for the Division of Innovation and Applied Research at Towson

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University and as deputy assistant secretary for the Maryland Department of Labor, Licensing and Regulation. He also served in the Maryland Department of Public Safety and Correctional Services under two administrations, and began his career as a senate staffer working for U.S. Senator Barbara A. Mikulski of Maryland. Jeff holds both a master's degree in social sciences (with a focus in criminal justice) and a bachelor's degree in political science from Towson University.

**Capt. Jennifer Fan, SAMHSA**



**Capt. Jennifer Fan** is the ONDCP liaison in the Center for Substance Abuse Prevention (CSAP) under SAMHSA. She is also the co-lead for SAMHSA's Strategic Initiative on Prescription Drug Abuse Prevention. She has been the special assistant to the CSAP director and a pharmacist in the Division of Workplace Programs, helping to oversee the Federal Drug-Free Workplace Program. She was also a public health advisor in SAMHSA's Division of Pharmacologic Therapies in the Center for Substance Abuse Treatment, overseeing the National All Schedules Prescription Electronic Reporting Act grants for prescription drug monitoring programs, SAMHSA's Prescriber Education Courses, and compliance with opioid treatment programs. Previous assignments include the Food and Drug Administration's Office of Generic Drugs, Office of Drug Safety, and the Division of Drug Marketing, Advertising, and Communications; and the Centers for Medicare & Medicaid Services' Division of Ambulatory Services. She holds a Pharm.D. from the University of Maryland and a J.D. from the University of Baltimore.

## USING ADVANCED ANALYTICS TO ENHANCE DECISION MAKING

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**Ravi Goyal, Mathematica Policy Research**



**Ravi Goyal** is a statistician at Mathematica with more than 15 years of experience in using quantitative methods for complex projects and developing social network-based machine learning algorithms. In his current work, he is developing a statistical network analysis methodology for a community-based HIV prevention program, and evaluating cardiovascular disease prevention and primary care delivery programs. Dr. Goyal is the computational modeler in the design of the agent-based population model used to assess the feasibility (with regard to impact and statistical power) of the Botswana Combination Prevention Program—a CDC-funded study to evaluate whether coordinated and strengthened HIV biomedical interventions will significantly reduce new HIV infections at the community level. He holds a Ph.D. in biostatistics from Harvard University.

**Scott Cody, Project Evident**



**Scott Cody** serves as the managing director and chief product officer at Project Evident, a new organization that seeks to improve the way nonprofits and their funders generate and use evidence. Project Evident is designing a shared-services platform that offers nonprofits the best available resources for data, learning, and evaluation. The organization will work with nonprofits to help them design and execute multi-year evidence building plans that focus on continuous improvement as well as overall impact assessment. Scott is a national expert in using analytic methods to improve social programs. His work combines rigorous evaluation methodologies with data analytics to increase program efficiency and effectiveness. Before joining Project Evident, Scott was managing director of health program improvement at Mathematica Policy Research. He holds an M.P.P. in public policy from the Johns Hopkins University.

**Jaya Tripathi, The MITRE Corporation**



**Jaya Tripathi** is a principal scientist and advanced analytics expert at The MITRE Corporation. She is the principal investigator in MITRE's effort to apply health information technology to address prescription drug abuse. Ms. Tripathi has presented her research at numerous conferences including the annual meeting of the National Health Care Fraud Association and the Healthcare Information and Management Systems Society (HIMSS) annual conference, and has also presented her work as it relates to prescription drug misuse and abuse to the comptroller general of the United States at the Government Accountability Office, the Office of Management and Budget and the ONDCP. She holds master's degrees in physics and computer science from the University of Texas.

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## STEPS TO ADVANCE WASTEWATER TESTING FOR DECISION MAKING

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**Craig Thornton**, Mathematica Policy Research

**Craig Thornton** is an expert in health services research, disability policy, evaluation design, employment and training programs, and benefit-cost analysis. In his 35-year career at Mathematica, Thornton has directed and advised on studies of programs and policies that are designed to improve people's lives. Much of his work has been focused on initiatives to help people with disabilities participate fully in economic and community life. Thornton has also studied how well managed care and care management serve people with chronic illnesses and functional impairments, and how modifications to the Medicare and Medicaid programs could support better integration and health for people with such conditions. Thornton publishes widely in peer-reviewed journals and has authored book chapters on research design, benefit-cost analysis, and disability issues. He holds a Ph.D. in economics from the Johns Hopkins University.

