

Today's **Integrated Health Sciences Core** event is presented by



Welcome

Please ask questions in CHAT
Q&A will be at the end

Learn more at

<http://mleead.umich.edu>

Support for this center is provided by grant P30ES017885 (P.I. Dana Dolinoy)
National Institute of Environmental Health Sciences | National Institutes of Health



SCHOOL OF PUBLIC HEALTH
UNIVERSITY OF MICHIGAN

INTEGRATED HEALTH SCIENCES CORE



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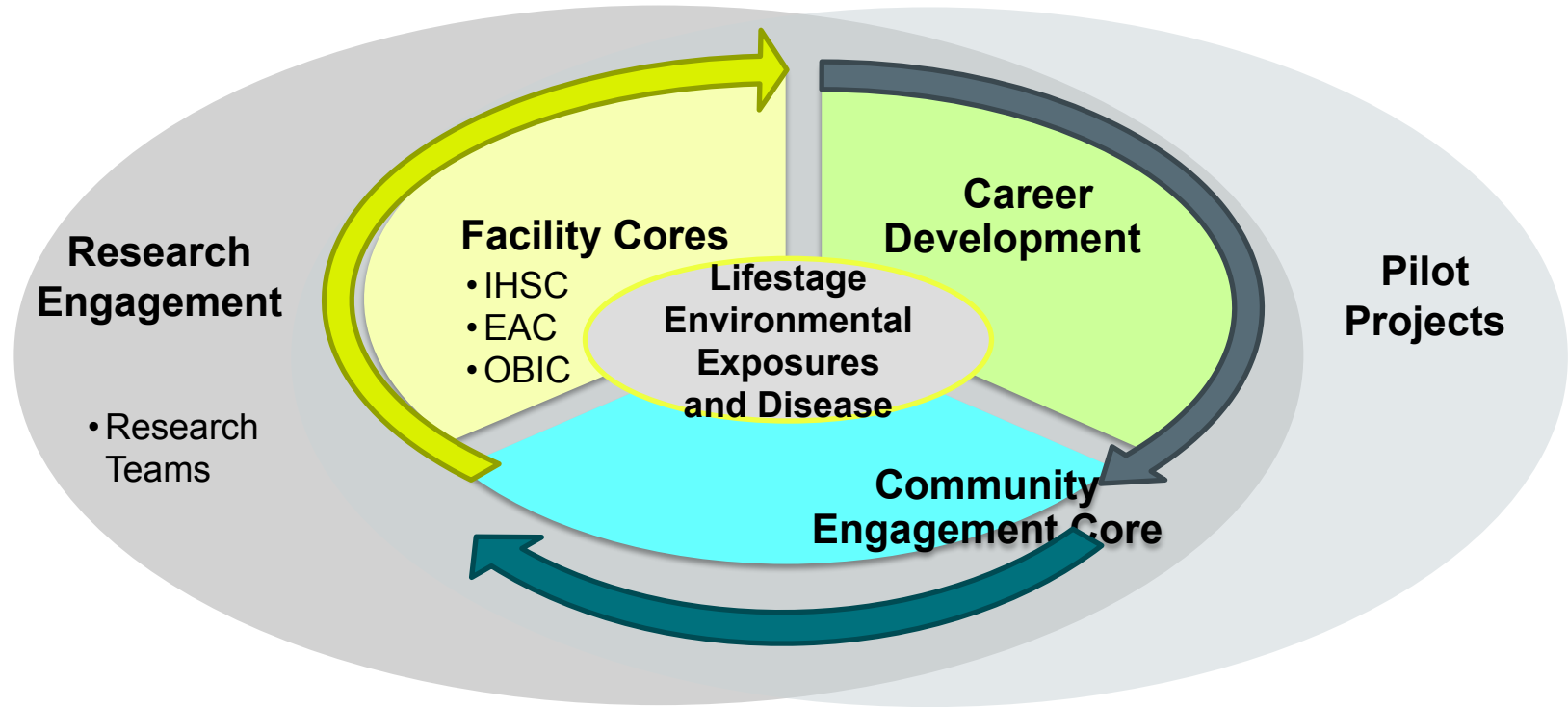


Lu Wang

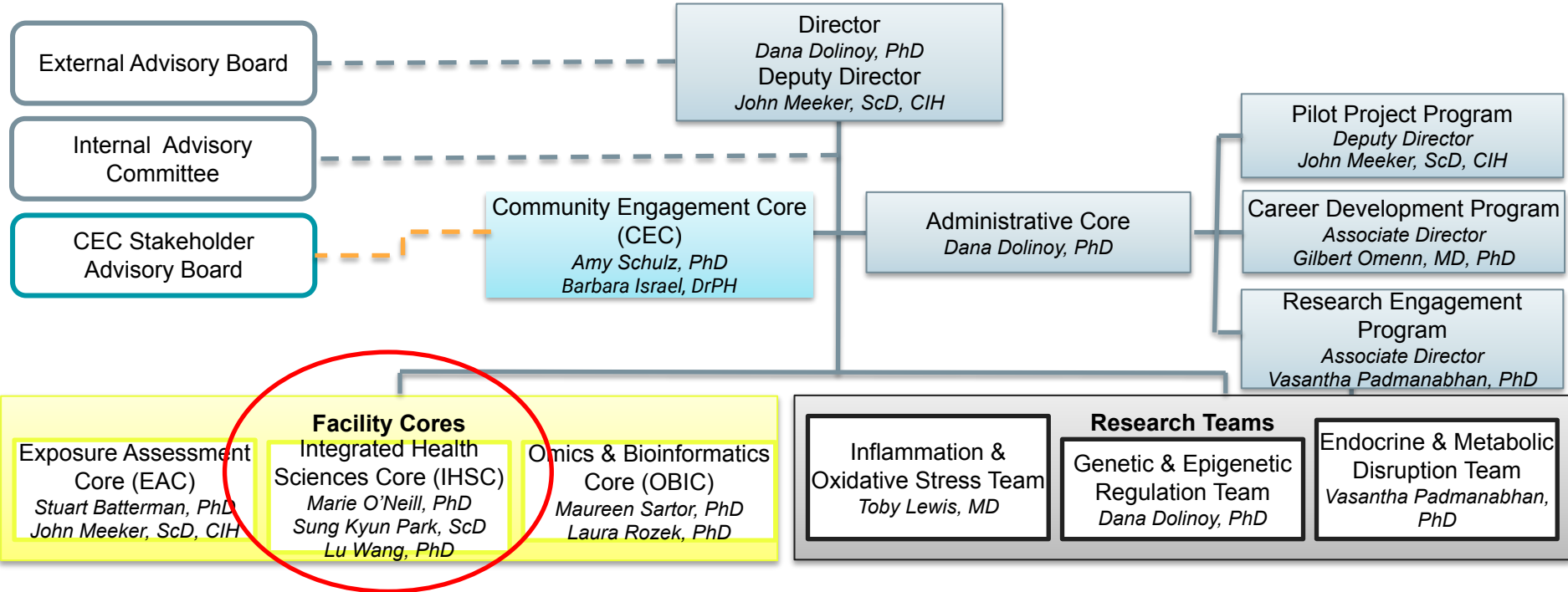


Trish Koman

Center Theme & Mission <http://mlead.umich.edu/>



Center Organization





AIM *to advance understanding*

We promote multi-directional translational research using integrated multidisciplinary approaches to advance understanding of the impact of environmental exposures across the life-course on risk of chronic disease.

We capitalize on the rich set of NIH-supported studies led by Center members that encompass a wide range of exposures and life-stages through the P30 Repository Kiosk, providing information about research opportunities within these well-defined human population and animal studies and their associated data and biorepositories.

Specific objectives

1 Provide Center investigators with state-of-the-art study design, laboratory and repository protocols, and statistical support relevant to advancing environmental health research, including specialized problems in case-cohort sampling, life-course epidemiology, epigenetics/epigenomics analyses, spatial statistical analyses, Bayesian methods, gene-environment interactions, and multi-pollutant exposures.

2 Educate and train faculty, staff, fellows, students and practitioners in study design, laboratory practice and curation of bio-repositories, and statistical methods through seminars and annual workshops.

3 Promote development of interdisciplinary collaborations that foster multi-directional translational research, optimize utilization of animal and human bio-repositories, and support development of statistical methods through seminars and the P30 Repository Kiosk.

4 Maintain and update the searchable, web-based information Kiosk that provides information about human and animal studies and Core services within the M-LEEd Center.

5 Catalyze multi-directional partnerships using GIS and Informatics/Public Health Tracking with professional practitioners to develop cumulative environmental risk frameworks that connect research on environmental risk factors to locations where people live, work and play throughout the life course.

The **P30 Repository Kiosk** facilitates interaction between basic, mechanistic and toxicological science, population sciences, clinical research and practice professionals through the web-based, searchable Kiosk. It provides information about research opportunities within these human population and animal studies, and their associated data and biorepositories.



CLASS Laboratory

1919 Green Rd. Auxiliary Services Bldg, Rm A120

Ann Arbor, MI 48109-2564

Phone: 734-763-2461

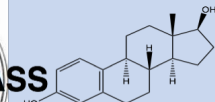
CLASS Lab is an off-campus university lab devoted to three primary service functions to facilitate research:

- Biosample collection kit design and build
- Analytical Assay Services
- Biorepository storage

Certified by the College of American Pathologists (CAP)
ensuring exceptional quality

Links to Kiosk, Applications and other information

<https://mlead.umich.edu>

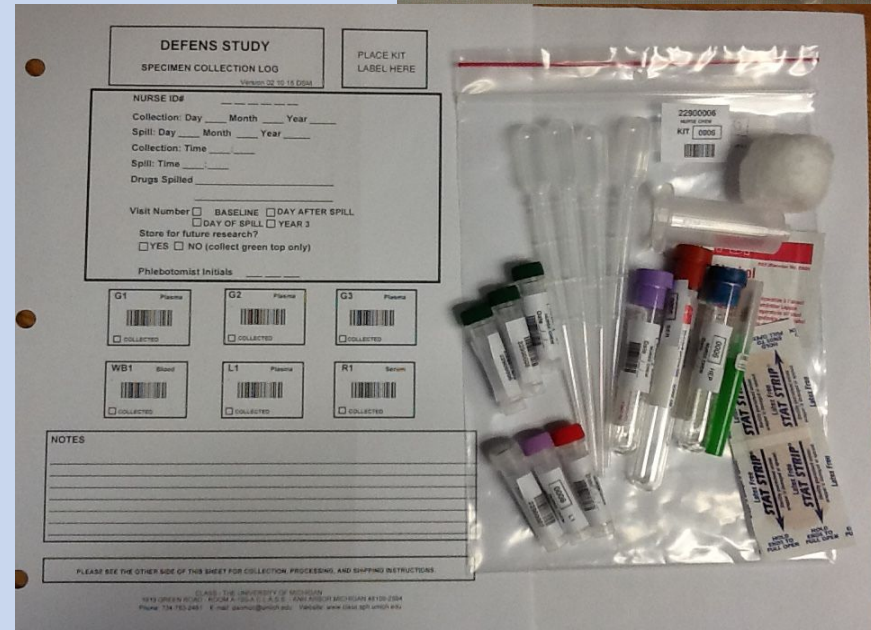


CLASS
Clinical Ligand Assay Satellite Service
School of Public Health Department of Epidemiology

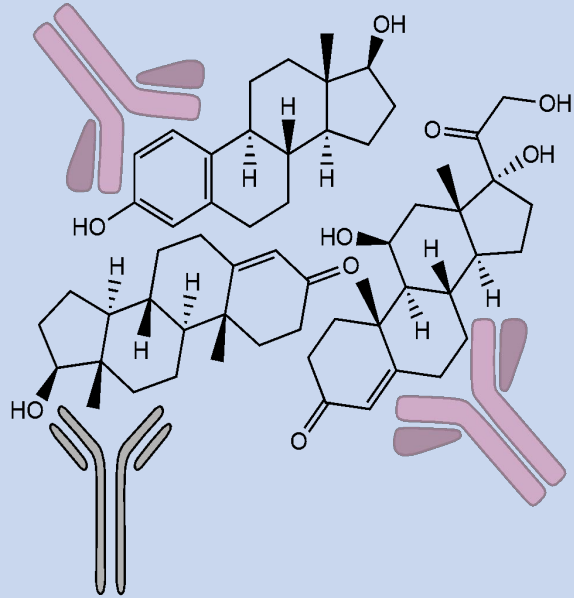
Biosample collection kit design & build

CLASS Lab can create custom, cost-effective sample collection kits.

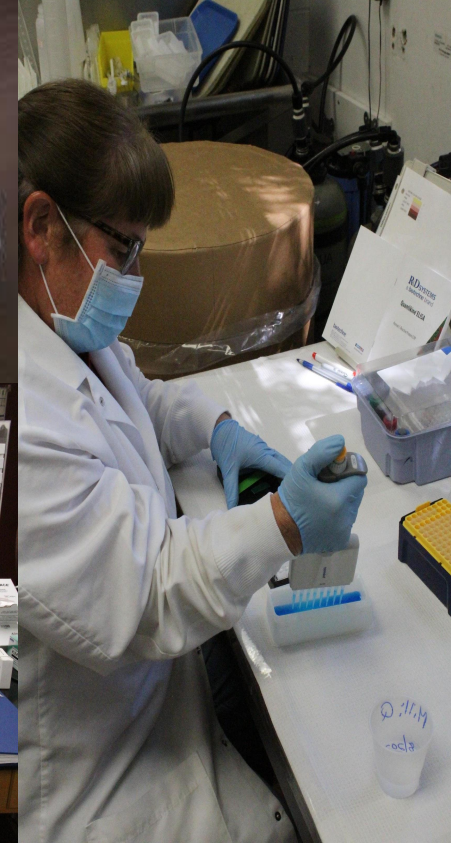
- Sample types include serum, plasma, whole blood, urine, saliva and stool.
- Kits are designed with serialized, bar-coded labels providing easy data entry and allowing for an electronic and physical audit trail of sample collection and disposition.
- Sample vials are color coded by sample type.



Assay Services



- Estradiol
- Testosterone
- Progesterone
- LH
- FSH
- CRP
- Cholesterol
- HDL
- LDL
- Glucose
- Cortisol
- IL-6
- Endothelin-1
- MCP-1
- SHBG
- Inhibin B
- AMH
- RANKL
- Leptin
- HMW Adiponectin,
- Adiponectin
- Resistin

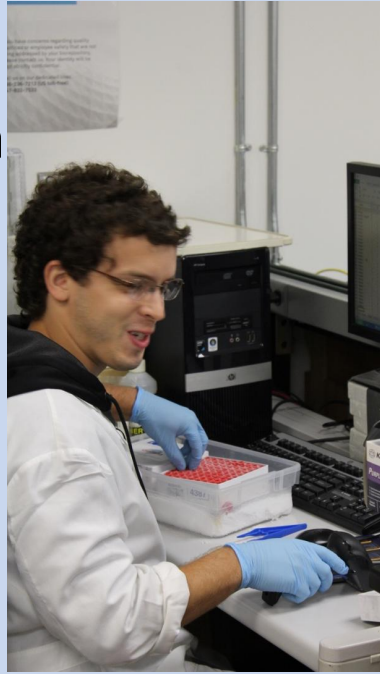


*For a full list of assays we
please visit our website
<http://www.class.sph.umich.edu>*

Biorepository storage

Freezer space for storing samples.

- No Charge for P30
- -80°C chest freezers
- -175°C Liquid nitrogen freezer
- Freezer monitoring technology
- Back-up generator
- Certified by CAP Biorepository Accreditation Program (BAP)



Statistics Consulting Services

- IHSC builds on the University of Michigan's (UM) strong **grant development, study design and analysis resources**:
 - *Michigan Center for Health Research* (MICHR, UM's Clinical and Translational Science Award (CTSA) program)
 - *Statistical Analysis of Biomedical Education and Research* (SABER) unit
 - *Center for Statistical Consultation and Research* (CSCAR)
- IHSC **does not duplicate** their services.
- We provide referrals for **basic methodological and grant development advice**.
- We provide the **more targeted and advanced methods consultations** required by center members to advance environmental health research.

- IHSC promotes the use of cutting-edge statistical methods to address **significant environmental health research priorities**.
- **Some examples** include:
 - *Exposure-response curves*
 - *Efficient assessment of multiple pollutants*
 - *Spatial interpolation of environmental exposure data*
 - *Combination of multiple data sources / Data integration*
 - *Gene-environment interactions*
 - *Data dimension reduction and correlation analysis for spatial data*
 - *Causal Inferences*

- **Consultancies are provided without fee** to **Center members** for proposal development.
- We also provide referrals to existing UM biostatistical resources.
- On-going statistical collaborations generated through such consultancies as well as actual costs of data and specimen collection are **supported as part of grant applications**.

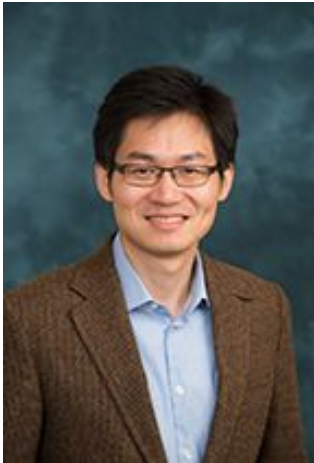
Table 1. UM Resources Available for Study Design, Data Analyses, and Statistical Support

Parent facility	Core/Unit	Resource	Primary contact
School of Public Health Department of Biostatistics	Statistical Analysis of Biomedical Education and Research (SABER)	Comprehensive data coordinating center for multi-center clinical trials and observational studies	Cathie Spino
UM Office of Research	Center for Statistical Consultation and Research (CSCAR)	Comprehensive statistical consulting service	Kerby Shedden
Institute for Social Research	Survey Research Center	Survey design, data collection and data analysis services	Matthew Shapiro
Institute for Social Research	Inter-University Consortium for Political and Social Research (ICPSR)	Data resources, user support, and training in quantitative methods	Margaret Levenstein
School of Medicine Clinical Translational Services Award	Michigan Institute for Clinical and Health Research (MICHR)	Research Development Core: Grant writing, K and other proposal development, translational toolkit	George Mashour
School of Medicine	Center for Computational Medicine & Bioinformatics	Development of software tools, data integration methods, and systems modeling environments	Gil Omenn

To disseminate knowledge of advanced statistical methods most relevant to environmental health research, we will continue to host our successful

- **Environmental Statistics Discussion Seminars** (1-2 per semester)
- **Annual Environmental Statistics Workshops** (to be arranged)
- **Environmental Statistics Day** (Annually, typically in the Fall semester)

Upcoming Environmental Statistics Discussion Seminar



Micro-randomized Trials in Mobile Health

Sep 22nd, 12pm-1pm

Zhenke Wu, Ph.D

**Assistant Professor of Biostatistics
School of Public Health, University of Michigan
Research Assistant Professor
Michigan Institute of Data Sciences (MIDAS)**

Environmental Statistics Day → Week

- A new format this year, Environmental Statistics Week.
- **Theme: COVID-19 research + statistics + EHS Challenges**



**COVID-19 and
Racial/Ethnic
Disparities**

Oct 19th, 12pm-1pm

Yanxun Xu, Ph.D

Assistant Professor
Johns Hopkins University



**Learning from COVID-19
Data in Wuhan, USA,
and the World**

Oct 20th, 12pm-1pm

Xihong Lin, Ph.D

Professor
Harvard University

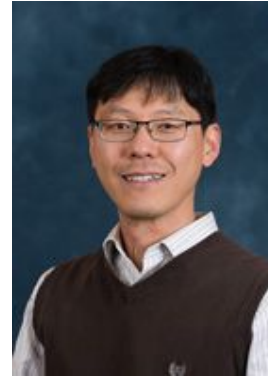


**COVID-19
Treatment and EHS
Challenges**

Oct 21st, 12pm-1pm

Emily Somers, Ph.D

Associate Professor
University of Michigan



**Environmental
Cadmium, Mortality
from Influenza and
Pneumonia**

Oct 22nd, 12pm-1pm

Sung Kyun Park, Sc.D

Associate Professor
University of Michigan



**A Spatiotemporal
Epidemiological Prediction
Model to Inform County-level
COVID-19 Risks**

Oct 23rd, 12pm-1pm

Peter Song, Ph.D

Professor
University of Michigan

Environmental Health Public Health Practice

We provide public health practice consultation

- For Researchers
- For community, government, industry

We enhance professional skills with workshops

- Communication and leadership
- Public comments
- Community engagement

Our Practice will focus on Climate Change & Health,
through the lens of environmental justice

Video for 2020 event:

http://mleead.umich.edu/Event_Climate_Change_and_Health_2020.php

CLIMATE CHANGE & HEALTH READINESS and RESILIENCE



FEATURING:

Renee N. Salas,
MD, MPH, MS • Assistant
Professor, Harvard Center for Climate,
Health, and the Global Environment
(C-CHANGE); Emergency Medical
Physician, Massachusetts General
Hospital and Harvard Medical School

Dr. Renee N. Salas, is an emergency medicine physician who co-authored the U.S. portion of the Lancet Countdown report and Health and Care Delivery in the New England Journal of Medicine. A panel of experts will present solutions from a variety of other universities who are reducing their carbon footprint in response to the urgent public health need.

MARCH 10, 2020 • 12:00 NOON – 1:30 PM
**DOW AUDITORIUM, UM TOWSLEY CENTER FOR
CONTINUING MEDICAL EDUCATION**

NORTH CAMPUS WATCH PARTY: The North Campus Sustainability Initiative will be organizing a watch party for this event in Room 3358 A/B of the Duderstadt Center. Please check our registration page for further details.



REGISTRATION + ADDITIONAL INFORMATION

<http://mleead.umich.edu/ClimateChangeAndHealth2020>



M LIFESTAGE ENVIRONMENTAL EXPOSURES AND DISEASE CENTER

SPONSOR: Michigan Lifestage Environmental Exposures and Disease Center (NIEHS funded);

CO-SPONSORS: School for Environment and Sustainability (SEAS); Department of Environmental Health Sciences, School of Public Health; UM Center for Global Health Equity; UM Medical School's Global Health and Disparities Path of Excellence; School of Nursing; LSA Residential College; Urban Planning, Taubman College of Architecture & Urban Planning



Connecting with Leaders in Public Health Practice



M
SCHOOL OF PUBLIC HEALTH
UNIVERSITY OF MICHIGAN

CLIMATE CHANGE & HEALTH

WHAT THE SCIENCE SAYS AND WHAT WE CAN DO

FEB 26, 2019 3:30-5 PM Summit 5-6 PM Reception • UM PALMER COMMONS

JOHN BALBUS, MD, MPH National Institute of Environmental Health Sciences •
KIM KNOWLTON, DrPH Natural Resources Defense Council & Mailman School of Public Health, Columbia University • welcoming remarks from F. DUBOIS BOWMAN, PhD Dean, University of Michigan School of Public Health

SPONSORED BY: Michigan Lifestage Environmental Exposures and Disease Center (LIEHDC) funded •
CO-SPONSORS: School for Environment and Sustainability (SEAS); Department of Environmental Health Sciences, Michigan Public Health • <http://goo.gl/DTS1EJ>




M I LIEHDC ENVIRONMENTAL EXPOSURES & DISEASE CENTER (M I EDC) • 2018 PRACTICE WORKSHOP

Using Systematic Review to Evaluate Population Level-Dose Toxicity from Endocrine Active Chemicals

RESEARCH AND POLICY IMPLICATIONS OF THE LANDMARK 2017 NATIONAL ACADEMIES OF SCIENCE REPORT

MARCH 29, 2018 4-6 PM • LAKE AUDITORIUM • 1899 SPH 1

David Dorman North Carolina State University
Weihsueh Chiu Texas A&M University
Andrew Rooney National Toxicology Program NIEHS
Julien Lam University of California - San Francisco



SPONSORED BY U-M LIFESTAGE ENVIRONMENTAL EXPOSURES & DISEASE CENTER (M I EDC) AND U-M ENVIRONMENTAL HEALTH SCIENCES

M UNIVERSITY OF MICHIGAN LIFESTAGE ENVIRONMENTAL EXPOSURES & DISEASE CENTER (M I EDC) • WORKSHOP CENTER FOR URBAN RESPONSES TO ENVIRONMENTAL STRESSORS (UCRES)

HEALTH EQUITY at INDUSTRIAL SCALE:

the Frank Lautenberg Chemical Safety Act under the Trump Administration

TUESDAY MARCH 28, 2017 • 12:00 – 2:00 PANEL • 2:00 – 3:00 RECEPTION
FORUM HALL IN PALMER COMMONS AT THE UNIVERSITY OF MICHIGAN – ANN ARBOR

 <p>DR. TRACY WOODRUFF Professor Department of Population, Behavior, and Environment Columbia University</p>	 <p>DR. GINA SOLOMON Toxicology Director Texas A&M University</p>	 <p>NICK SCIERLECK Associate Professor, Deputy Dean, Environmental Science Center University of Michigan</p>	 <p>DR. TARA HUNT Associate Professor U.S. EPA, Office of Environmental Assessment Environmental Protection Agency</p>
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Register online <https://goo.gl/15Z8BT> Watch online <https://goo.gl/Ur6v8a>

2018-2019 U-M Lifestage Environmental Exposures & Disease Center (M I EDC) • Super Site Center for Urban Responses to Environmental Stressors (UCRES) • U-M Life Stage Environmental Exposure & Disease Center • Michigan Toxic Substances Laboratory • Michigan State University • University of California at San Francisco • Population Research Institute • U.S. Environmental Protection Agency • U.S. National Toxicology Program • U.S. Environmental Protection Agency • U.S. Environmental Protection Agency • U.S. Environmental Protection Agency • U.S. Environmental Protection Agency • U.S. Environmental Protection Agency • U.S. Environmental Protection Agency

LIFESTAGE ENVIRONMENTAL EXPOSURES AND DISEASE CENTER SCHOOL OF MICHIGAN

UCRES OHS MICHIGAN

LIFE SCIENCE • ENVIRONMENT • HEALTH • EDUCATION • LAW SCHOOL

Environmental Research Seminar Series

- An interdisciplinary forum for interested researchers to come together to learn and discuss wide-ranging issues in the field of environmental health
- Seminar Series in 2019-2020
 - Bruce Tonn (Three3 Inc), Health & Household-Related Benefits of Weatherizing Low-Income Homes & Affordable Multifamily Buildings
 - Community-Based Participatory Research Panel Discussion w/ Erica Marsh, Neeraja Aravamudan & Barbara Israel (co-host with CEC)
 - Jack D. Spengler (Harvard) Health, Nature and Our Built Environment
 - Betsy Wasilevich (MDHHS) PFAS in Michigan: the state of MI's investigations and responses
 - Ivo Dinov (Med) Statistics Online Computational Resource (SOCR) DataSifter
 - Jackie Goodrich (EHS) Environ exposures, epigenetics & health in vulnerable populations

Environmental Research Seminar Series

- This year's ER Seminar Series
- Bi-monthly, Tuesday 12-1pm
- All virtual this year

- 10/06/2020: Ted Zellers (UM SPH EHS)
 - Wearable Microsystem for Direct Measurement of Multi-VOC exposures
- 11/10/2020: Kim McKee (UM Med School Family Medicine)
 - Vaginal Microbiome Research
- 11/24/2020: Marie-Anne Rosemberg (UM Schl of Nursing)
 - The impact of COVID-19 on Service Workers

M-LEEd Virtual Event: October 7, 2020 1-3pm

- Per- and polyfluoroalkyl substances (PFAS): Exposure, Toxicity, and Policy
- Speakers
 - Elsie Sunderland, PhD (Harvard)
 - Jamie DeWitt, PhD (Eastern Carolina University)
 - TBD - Environmental Policy and PFAS
- Registration is required
- Registration form at mleead.umich.edu

Thank you for your attention!

