



SETAC



# SALT LAKE CITY



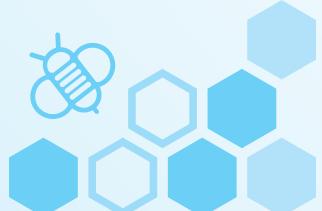
**BUZZING WITH SCIENCE**

Cross-Pollination for Environmental Progress



## MEETING PROGRAM

SETAC North America 36<sup>th</sup> Annual Meeting  
1-5 November 2015 | Salt Lake City, UT, USA



Come visit us  
on Booth #1100



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# Welcome to SETAC Salt Lake City

## **The Society of Environmental Toxicology and Chemistry North America welcomes you to its 36th annual meeting at the Salt Palace Convention Center in Salt Lake City, Utah!**

So much has changed in Salt Lake City since we were here in 2002. The city is now home to an arts district, a burgeoning microbrewery industry and a music scene. The Salt Palace itself has been significantly updated with more than 6,000 solar panels installed on the roof in 2012, and in 2006, the building was awarded the US Green Building Council's LEED Silver certification. The city has expanded its light rail system (TRAX) to connect the airport, downtown, universities and nearby towns, and right across the street from the Salt Palace is the new City Creek Center mall.

Our meeting theme, "Buzzing with Science: Cross-Pollination for Environmental Progress," plays on Utah's nickname, "the Beehive State," and highlights SETAC's interest in pollinator health research and advances our strategy for solving environmental problems through cross-disciplinary collaborations. Our technical program reflects the theme through robust, diverse and environmentally relevant topics. On Sunday, choose from ten professional training courses for both personal and technical growth such as "Leadership 101: Evaluate your Behavior, Strengths, and Challenges and Build Leadership Capacity" and "Pesticide Risk Assessment for Pollinators," or join an interactive game for environmental education. Also on Sunday, plenary speaker Lynn de Freitas with Friends of Great Salt Lake will familiarize us with the ecosystem and economy of the city's namesake, the Great Salt Lake. Jim Cane with the US Department of Agriculture will touch on our meeting theme on Monday with a talk about pollinators. On Tuesday, David Montgomery with the University of Washington explores our relationship with and reliance on microbes. And on Wednesday, SETAC's own Elaine Dorward-King with the Newmont Mining Corporation will dig into mining and sustainability.

The week's scientific presentations run Monday through Thursday and are organized in 96 platform sessions and four all-day poster sessions. Special symposia topics include pollinators and agrochemicals, the Deepwater Horizon oil spill, effective science communication and outreach, and a look back at 20 years of metals science contributions by the Ecotoxicity Technical Advisory Panel. The North America Horizon Scanning Workshop will take place on Wednesday and Thursday to analyze feedback on priority research areas identified in the Global Horizon Scanning surveys. The grand finale is the Closing Ceremony on Thursday afternoon, which will include highlights from technical and social activities and previews of upcoming SETAC meetings in Nantes, France, Singapore, and the 7<sup>th</sup> World Congress/SETAC North America 37<sup>th</sup> Annual Meeting in Orlando, Florida. And, of course, a drawing for a Hobie kayak and a bicycle from Salem Cycle, but you must be present to win!

If you need a little break to make more room in your brain for science, take advantage of the social program. Activities include trips to the Great Salt Lake, Park City, Wendover, the Utah Olympic Oval and sites within Salt Lake City. Explore some interesting local spots on your own like the Leonardo (as in Da Vinci), which is the city's public library featuring an art gallery, a rooftop garden and beehives, the State Capitol and Temple Square, just to name a few. Stretch your legs at the Melissa Schultz Memorial 5K Fun Run on Tuesday in Liberty Park. And be ready for a musical fight at Keys on Main, a dueling piano bar and host of the Tuesday Night Social.

Be sure to support SETAC student activities by bidding on Silent Auction items and see which SETAC group – Board of Directors, Program Committee or Advisory Groups – brings in the most money to win this friendly competition to support student activities. Last year's highly successful "Jail-and-Bail" returns to raise money for the North America Endowment Fund. Put your mentor, academic advisor or, dare I suggest, your president behind bars for a good cause. SETAC is partnering with Friends of Great Salt Lake and local area schools for this year's Make-a-Difference Service Project, sponsored by Ramboll ENVIRON. The service project will include a Great Salt Lake Area cleanup. If you have extra time before or after the meeting, Utah is also home to amazing scenery and hiking at five National Parks.

This event and outstanding member programming would not be possible without generous contributions of our many meeting supporters, exhibitors and advertisers; SETAC Global Partners and Affiliates; and SETAC North America Sustaining and Affiliate Members.

We also recognize and are grateful for the superhuman efforts of the SETAC Pensacola staff with tremendous support from their SETAC Europe counterparts for making this meeting come together and run smoothly. And finally, on behalf of the SETAC North America Board of Directors, the Salt Lake City Program Committee and SETAC staff, a big thanks to you, the SETAC membership, for your contributions of scientific knowledge, career mentoring, time and participation in this, our 36<sup>th</sup> annual meeting.

We hope you have a productive, informative meeting and enjoy your time in Salt Lake City!

**Elin Ulrich and Carrie Claytor**  
SETAC Salt Lake City  
Program Committee Co-Chairs

**Mary Riley**  
SETAC North America  
President

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# Dear Fellow SETAC Members,

Welcome to the SETAC North America 36<sup>th</sup> Annual Meeting! We are pleased to join you for an event that promises to be “Buzzing with Science.” The science will buzz at presentations, around posters, in advisory group meetings and while planning activities for our journals, workshops and the upcoming 2016 World Congress in Orlando. The networking opportunities at SETAC’s formal and informal social gatherings will be held with Salt Lake City’s beautiful cityscape as a backdrop.

The annual meeting is also a time to reflect on who we are and where we are headed as a professional society. SETAC was established in 1980 with a few hundred members in North America and has since grown into a truly global organization, now boasting 6,000 members from more than 100 countries. Of the five geographic units – North America, Europe, Asia/Pacific, Latin America and Africa – SETAC North America (SNA) is the largest with about 3,000 members. SNA reflects the multi-sector nature of SETAC with 41 percent of members from academia, 33 percent from business and 19 percent from government. Importantly, SNA includes more than 700 members who are either students or recent graduates. SETAC values and focuses on students and professional development because students are critically important to the future of our society. SNA efforts are visible through the activities of the SETAC North American Student Advisory Council (NASAC), popular mentoring programs, poster, presentation and travel awards, and other opportunities. The Young Environmental Scientist (YES) meeting, a meeting by students for students, originated in SETAC Europe and is going global with the next meeting being held in Gainesville, Florida, in 2016.

Researchers at all levels of their career are encouraged to join one or more Advisory Groups, which provide an opportunity to discuss various scientific issues of interest. Advisory Groups are open to all, not just “experts” in the area, so please take advantage. And, if you are interested in regional activities, use the meeting to seek out your local SETAC chapter. The grassroots nature of SETAC places the future of our science programming in your hands. As the society continues to grow and as environmental issues and challenges continue to emerge, there is a lot to dive into.

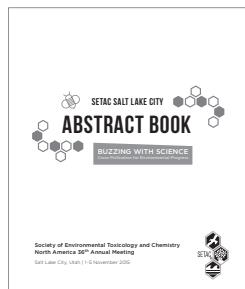
Please introduce yourself to us during the course of the meeting. Feel free to ask us any question about SETAC, and explore how you can use our society to help you achieve your professional goals.

Have a great meeting,

*Barnett A. Rattner* *Charles Menzie*

**Barnett Rattner**  
SETAC President

**Charles Menzie**  
SETAC Global  
Executive Director



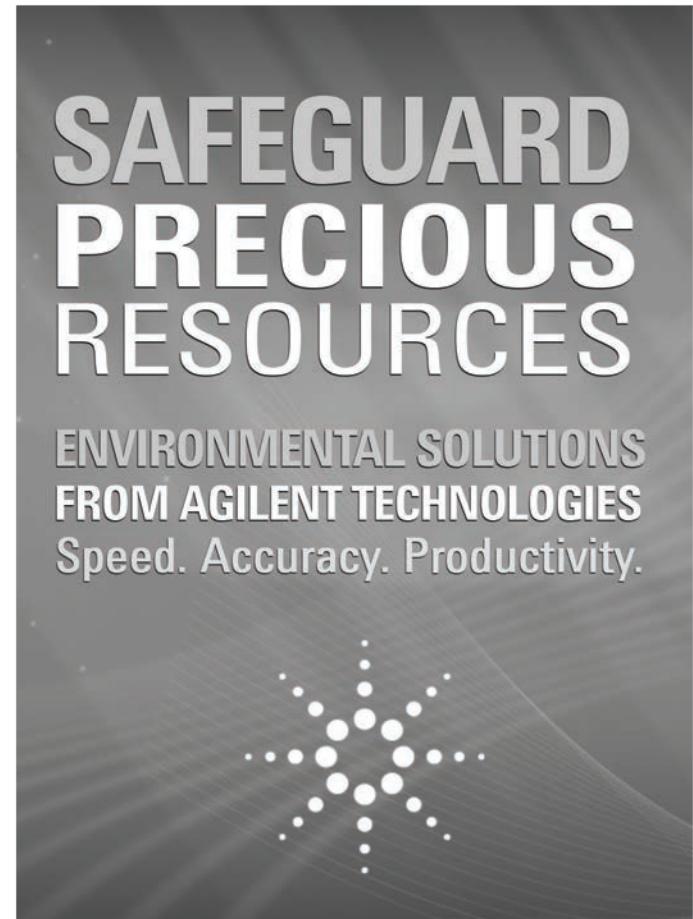
## ABSTRACT BOOK

Download your copy of the SETAC Salt Lake City abstract book at [slc.setac.org](http://slc.setac.org).



## MEETING APP

Download the free SETAC Salt Lake City meeting app from iTunes or Android app stores.



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Joe Meyer	
Bill Foreman	
Emma Lavoie	
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Jeff Morris	Dave Mayfield
Chris Mebane	Stephanie Baker
<b>Exhibits</b>	<b>Green/Service Committee</b>
Sascha Usenko	Jamie DeWitt
Michael Lee Jones	Ping Sun (Sunny)
<b>Professional Training Courses</b>	<b>Student Activities</b>
Jodi Mohs-Davis	Renee Falconer
Christy Morrisey	Austin Gray
	Nicole Hagan

## SETAC North America Staff

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 Sabine.Barrett@setac.org, Communications Manager  
 Teresa.Daugherty@setac.org, Finance and Membership  
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 Jen.Lynch@setac.org, Publications Manager  
 Nikki.Mayo@setac.org, Events Manager  
 Josh.Sullivan@setac.org, Communications Specialist  
 Laura.Swanson@setac.org, Membership and Awards Manager  
 Bruce.Vigon@setac.org, Scientific Affairs Manager

**And a special thanks to the SETAC Europe staff for their on-site support:**

Bart Bosveld, Roel Evens, Veerle Vandeviere and Valerie Verstappen

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A big thank you to the SETAC Global Partners and Affiliates for helping ensure our goal of Environmental Quality Through Science®.



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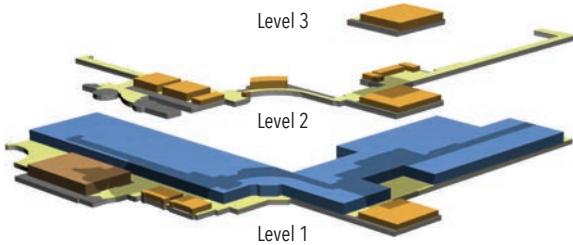


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Member? Visit us at the registration desk  
during the meeting, or contact:  
**Linda Fenner**  
[linda.fenner@setac.org](mailto:linda.fenner@setac.org)  
+1 850 469 1500 ext. 108.



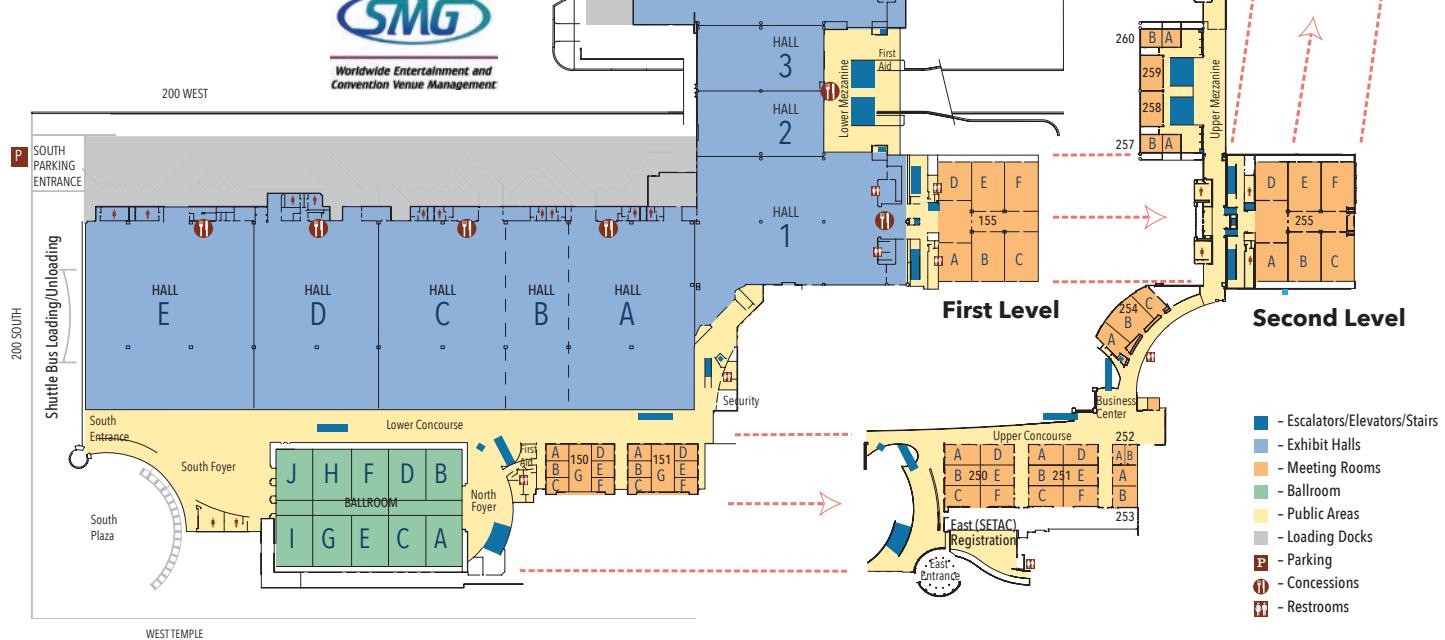
# Convention Center

Calvin L. Rampton Salt Palace Convention Center

100 West Temple, Salt Lake City, UT 84101

Phone: (385) 468-2222

- » Silver level LEED certification
- » Solar panel installation on the Salt Palace rooftop provides 1.59 megawatts of solar power



## Things to Do in Salt Lake City

You'll never run out of things to do in Salt Lake City. Take some time to see the sights in and around the beautiful city and state. From mountain recreation to art museums to historic shopping villages, Salt Lake City offers something for everyone.

Visit [visitsaltlake.com/setac2015/](http://visitsaltlake.com/setac2015/) to find out more.

# SETAC North America Sustaining and Affiliate Members

SETAC North America Sustaining and Affiliate Members are for-profit and nonprofit organizations, institutions, government agencies or associations who are concerned with the society's affairs and who help advance the society's goals. Thank you for your support!



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Interested in becoming a SETAC North America Sustaining or Affiliate Member?

Visit us at the registration desk during the meeting, or contact Linda Fenner, [linda.fenner@setac.org](mailto:linda.fenner@setac.org) or +1 850 469 1500 ext. 108, for more information.

All tours will depart from the Salt Palace Convention Center. Please arrive 15 minutes prior to departure time.

## Sunday

### **Birding at Antelope Island**

8:00 a.m.-2:00 p.m. | Meeting Point Near SETAC  
Registration | \$45

The SETAC Birding Group will explore Antelope Island, a highly regarded bird- and wildlife-viewing destination approximately one hour north of Salt Lake City. Millions of birds, particularly a wide variety of waterfowl and wading birds, congregate along the shores surrounding the island, offering unparalleled opportunities for birding. Antelope Island is one of the best area hotspots for rarities including three species of scoter, Long-tailed Duck, Harlequin Duck, Ruddy Turnstone, Hudsonian Godwit, Sabine's Gull, Mew Gull, Curlew Sandpiper, Red Phalarope and Snow Bunting. Late fall and early winter, coinciding with our SETAC meeting, are a great time to visit this region as Eared Grebes and Wilson's Phalaropes use the Great Salt Lake as a staging area, along with numerous other species. Our destination, the 28,800-acre Antelope Island State Park, features an abundant wildlife population, including one of the largest free roaming herds of American bison in the US; pronghorn also have been successfully introduced to the park.

Our trip will be led by Don Paul, president of AvianWest Inc., a bird and habitat conservation business. He currently serves on the Shorebird Science Team for the Intermountain West Joint Venture. He is also President of the Linking Communities, Wetlands and Migratory Birds, Utah Committee. Don Paul is a career wildlife biologist who consults for a variety of organizations interested in the Great Salt Lake and its birds. He is also a founding member of the Great Salt Lake Bird Festival planning committee.

## Monday

### **Ice Skating at the Utah Olympic Oval**

1:00 p.m.-4:00 p.m. | Meeting Point Near SETAC  
Registration | \$55

Lace up your skates and step out onto the ice of an official Olympic venue! During the 2002 Winter Games, the Oval saw athletes set 10 Olympic records and eight world records, while the facility gained a reputation for the "Fastest Ice on Earth." Learn to curl or just enjoy a relaxing spin around the arena. Ice skate rental is included. Please arrive 15 minutes prior to departure time. Tour will depart and return to the Salt Palace Convention Center.

## Wednesday

### **ATV/Wendover Trip**

8:00 a.m.-8:00 p.m. | Meeting Point Near SETAC  
Registration | \$205

Come join us for a guided day-trip across the Great Salt Lake Desert into the heart of the Great Basin. Wendover, 120 miles west of Salt Lake City, sits in the middle of one of the largest open public land areas in the US. Enjoy a professional guide that will offer interpretation of the areas rich natural and human history.

You will see and learn about the Great Salt Lake, the California Trail, the Pony Express Trail, the Bonneville Salt Flats and International Speedway, Danger Cave, World War II Wendover Airfield, native cultures, geology and ecology, wildlife viewing, including wild horses, and more. There will also be the opportunity to enjoy Nevada-style gaming at one of five Wendover Casinos with 4 hours of free time. The trip includes lunch and the option for a two-hour ATV Tour, weather permitting.



# Optical Oxygen Sensor Systems

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# 2015 SETAC Global Award Winners



Founders Award

## Charles Tyler, University of Exeter

The Founders Award is the highest honor SETAC can bestow. It is given to an individual whose outstanding career and significant contributions to environmental science reflect the goals of SETAC.



Herb Ward Exceptional Service Award

## Joke van Wensem, Soil Protection Technical Committee

Renamed in 1999 to honor *Environmental Toxicology and Chemistry*'s founding Editor-in-Chief C. Herb Ward for his important contributions to the founding and development of SETAC, this award recognizes a SETAC member who has performed long-term, exceptionally high-quality service to the society.



SETAC/ICA Chris Lee Award

## Anne Cremazy, University of British Columbia

Jointly sponsored by SETAC and the International Copper Association, this award provides up to \$5,000 to a graduate student or recent graduate whose ongoing research focuses on fate and effects of metals in the environment.

SETAC/Procter &amp; Gamble Fellowship

## To be announced at the Opening Ceremony

6:00 p.m.-7:30 p.m. | Ballroom A

This \$15,000, 1-year grant, sponsored by Procter & Gamble, is bestowed annually, and rotates among the five SETAC geographic units. The Fellowship will recognize a student enrolled in a doctoral program at a European or African university.

THE SETAC JOURNAL BEST PAPER AWARDS RECOGNIZE INNOVATIVE OR CREATIVE PAPERS WITH TRANSPARENT, REPRODUCIBLE, RIGOROUS, AND RELEVANT SCIENCE.



Environmental Toxicology and Chemistry Best Student Paper Award, Sponsored by Colgate-Palmolive

## Francesca Gissi, CSIRO

A robust bioassay to assess the toxicity of metals to the Antarctic marine microalga *Phaeocystis antarctica*  
*Francesca Gissi, Merrin Adams, Catherine King and Dianne Jolley*



Environmental Toxicology and Chemistry Best Paper Award

## Matthew J. Binnington, University of Toronto

Clarifying relationships between persistent organic pollutant concentrations and age in wildlife biomonitoring: Individuals, cross-sections, and the roles of lifespan and sex  
*Matthew J. Binnington and Frank Wania*



Integrated Environmental Assessment and Management Best Paper Award

## David Janz, University of Saskatchewan

Integrative assessment of selenium speciation, biogeochemistry, and distribution in a northern coldwater ecosystem  
*David M. Janz, Karsten Liber, Ingrid J. Pickering, Cheryl I.E. Wiramanaden, Shari A. Weech, Maria Gallego-Gallegos, Melissa K. Driessnack, Eric D. Franz, Meghan M. Goertzen, James Phibbs, Justin J. Tse, Kevin T. Himbeault, Erin L. Robertson, Charlene Burnett-Seidel, Kent England and Anne Gent*



SETAC NORTH AMERICA FOCUSED TOPIC MEETING

# Environmental Quality Implications of Unconventional Natural Gas Development

17-19 MARCH 2016  
DENTON, TX, USA

Registration opens 9 November.  
**Visit [fracking.setac.org](http://fracking.setac.org).**



# 2015 SETAC North America Award Winners



SETAC Government Service Award

## **Fengchang Wu, Chinese Research Academy of Environmental Science**

Recognizing exemplary dedication and service by a scientist toward promoting the collective application of environmental toxicology and chemistry to risk assessment in a government function.



SETAC/Menzie Environmental Education Award

## **Kenneth Sajwan, Savannah State University**

This year the award, sponsored by the Menzie family, targeted improving environmental science curricula and technical education at any level of the educational system and supporting innovative educational programs that encouraged and stimulated the professional development of environmental scientists.



SETAC/EA Jeff Black Fellowship Award

## **Timothy Bock, Rhode Island College**

Jointly sponsored by EA Engineering, Science, and Technology, Inc. and SETAC, this fellowship provides \$2,000 to an outstanding Master's level student engaged in any field of study encompassed by SETAC.



Eugene Kanaga SETAC Membership Award

## **Paul Sibley, University of Guelph**

The Eugene Kanaga Award is given annually to any member that provides leadership and development opportunities to the members of SETAC at either the national or chapter level.



Outstanding Regional Chapter Member Award

## **David Kent, Science Traveler**

This award goes to a North America regional chapter member who consistently contributes to the development of the society at the chapter level and who has improved the chapter's services.

## **Student Travel Awards**

### **SETAC NORTH AMERICA ENDOWMENT FUND**

PHD

Bethany DeCourten, University of North Carolina, Wilmington

MASTERS

Sharon Hartzell, University of Maryland College Park

UNDERGRADUATE

Leah Cuscito, University of Winnipeg

# Meet our ecotoxicology team

Questions about product testing?

**Ask Tam.**

Questions about GLP testing?

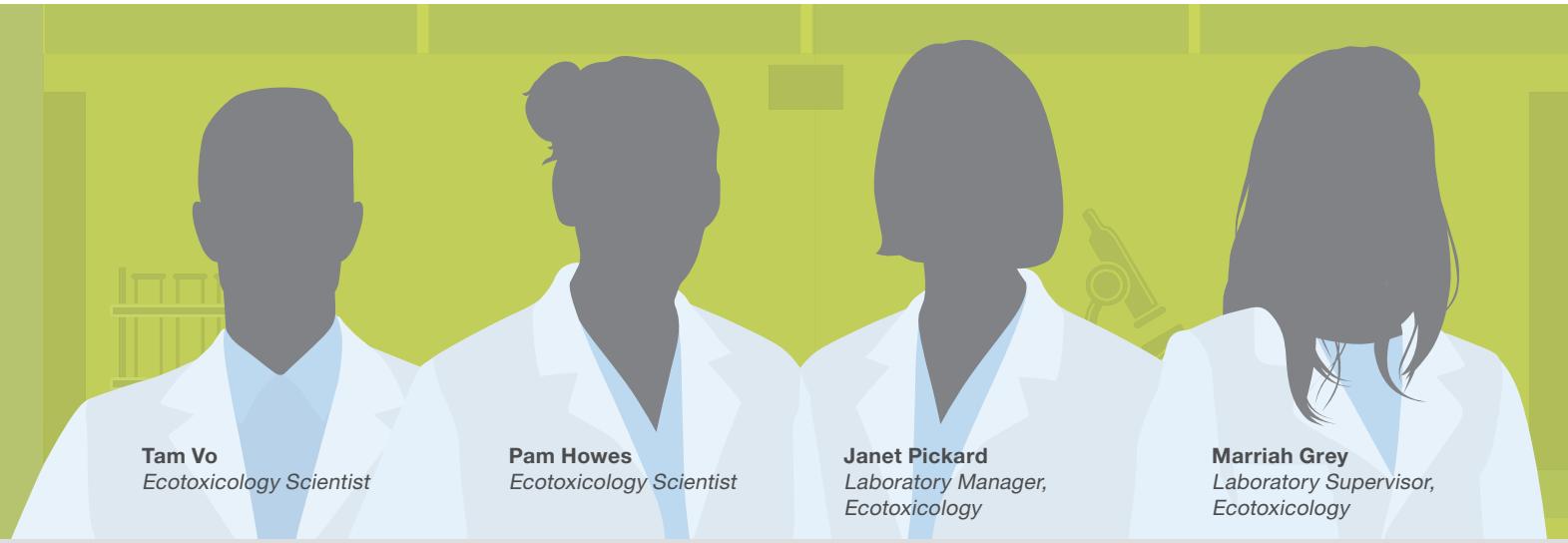
**Ask Pam.**

Questions about effluent testing?

**Ask Janet.**

Questions about sediment testing?

**Ask Marriah.**



Visit us at booth #404 and put a face to a name!

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# Student Events at a Glance

Not signed up for one of our student events? Talk to us at the registration desk to see if there are still spots available.

## Sunday

7:30 p.m.–9:30 p.m. **Meet NASAC Members** | Student Corner in the Exhibit Hall  
SETAC North America Student Advisory Council (NASAC) members will be available during the opening reception and poster socials throughout the week. Chat with your NASAC representatives and learn more about what we do and how you can become more involved.

## Monday

11:15 a.m.–1:00 p.m. **Student/Mentor Lunch** | Room 255DEF | Cost: US\$5 and pre-registration is required  
After the morning platform sessions on Monday, plan to attend the Student/Mentor Lunch. You can't afford to miss this opportunity to mingle and dine with many SETAC members! Your participation will strengthen your networks within SETAC and provide a valuable opportunity to discuss scientific topics and career experiences with mentors. There will be informal mingling for half an hour, followed by lunch.

All day **Reddit Ask Me Anything** | Student Corner in the Exhibit Hall

6:00 p.m.–6:30 p.m. **Meet NASAC Members** | Student Corner in the Exhibit Hall

## Tuesday

11:15 a.m.–1:00 p.m. **Women in SETAC Luncheon** | 254 | Cost: \$30 and pre-registration is required  
Students are encouraged to attend the Women in SETAC Luncheon. This year's speaker, Carine Clark, President and CEO at MaritzCX, will address "Risk – Conquering Fear and Embracing Disruption." Find out more on page 35.

6:00 p.m.–6:30 p.m. **Meet NASAC Members** | Student Corner in the Exhibit Hall

## Wednesday

9:00 a.m.–11:00 a.m. **Career Navigation** | Student Corner in the Exhibit Hall  
Finding your first job after graduation can be difficult. To make the transition easier, become part of the inaugural Career Navigation event, which will provide students with tools to help find professional careers post-graduation. Meet professionals working in the area of environmental toxicology and chemistry and get their feedback on your resume and guidance about possible career-paths.

11:15 a.m.–1:00 p.m. **Noontime Seminar** | 254 ABC | Cost: Free but pre-registration is required  
Emily Skor, Vice President, Communications, Consumer Healthcare Products Association (CHPA) and Executive Director, CHPA Educational Foundation will discuss "Communicating Risk in 140 Characters or Less." Find out more on page 49.

1:00 p.m.–2:00 p.m. **NASAC Open Student Assembly** | 254 ABC  
Please join us for our annual Open Student Assembly Meeting! We will give a short presentation about NASAC and how you can get involved. We'd love to hear your ideas about student activities for the next annual meeting and beyond. We will also have a short presentation about the 5<sup>th</sup> Young Environmental Scientist meeting in 2016 in Gainesville, Florida. Hope to see you there!

6:00 p.m.–6:30 p.m. **Meet NASAC Members** | Student Corner in the Exhibit Hall

9:00 p.m.–until **Student Mixer** | The Hotel and Club Elevate | Cost: \$20 (tickets include 2 drinks)  
Come join us for the 2<sup>nd</sup> Annual North America Student Mixer! There will be drinks, music and dancing at The Hotel and Club Elevate. Drinking age is 21+. Transportation will not be provided but the venue is within walking distance of the convention center.

# SETAC Europe 26<sup>th</sup> Annual Meeting

22-26 May 2016

Nantes, France

La Cité Nantes Events Center

[nantes.setac.org](http://nantes.setac.org)

Nantes 2016  
SETAC Europe

## Environmental Contaminants from Land to Sea: Continuities and Interfaces in Environmental Toxicology and Chemistry



**Abstract submission deadline: 25 November**



[www.setac.org](http://www.setac.org)



# Opening Ceremony

6:00 p.m.-7:30 p.m. | Ballroom ABCD

## Keynote by Lynn de Freitas

Executive Director, FRIENDS of Great Salt Lake

Lynn de Freitas's presentation will provide an introduction to the natural history of the Great Salt Lake and the surrounding area. De Freitas began her involvement with FRIENDS of Great Salt Lake shortly after its founding in 1994. She became president of the board in 1996 and executive director in 2002. She is a full-time volunteer. She especially enjoys working on developing policies that address the unique role and characteristics of the Great Salt Lake to ensure its long-term sustainability.

Prior to her affiliation with FRIENDS of Great Salt Lake, de Freitas was a library media coordinator for 18 years in both

public and private schools in the Salt Lake area. She holds a B.S. degree in Biology from Montclair State College and a M.Ed. degree in Educational Systems and Learning Resources from the University of Utah. In 2007, she received the Girl Scouts of Utah Award for Courage, Confidence and Character. In 2006, she received the Calvin K. Sudweeks Award for outstanding contributions in the water quality field in the State of Utah by the Utah Water Quality Board. In 2002, she received the Utah Environmental Educator Volunteer of the Year Award from the Utah Society for Environmental Education.

In her free time, she is an avid birder, enjoys travel and is learning dressage.

## Hydrotopia: An Interactive Game for Environmental Education

**Game:** Sunday 1 November | 1:00-5:00 p.m. | Room 250 AB

**Reflection Session:** Tuesday 3 November  
1:00 p.m.-3:00 p.m. | Room 151G

As taught in most introductions to environmental toxicology, the 20<sup>th</sup> century has seen a paradigm shift from “dilution is the solution to pollution” to an idea that actions can “boomerang” and waste that is thrown away can come back to do harm. Effective management of environmental resources requires foresight to predict potential consequences and rapid adaptation to emerging information. For many students, there’s also a difference between understanding large concepts like systemic risk and delayed response in the abstract to actually applying lessons learned.

Hydrotopia is an educational game that gives participants the opportunity to assume the role of decision-makers, balancing the sometimes conflicting needs of different stakeholders. Each team of players assumes the management of a virtual town located along the continuum of a large river. Players will be tasked with developing the economy of their towns, providing their towns with clean drinking water, voting on important environmental regulation and commissioning scientific studies to gain additional information. All teams will also have a unique goal for the game, meaning that each team will effectively represent a different group of stakeholders. This format is ideal for teaching the cumulative effects of pollution and the tragedy of the commons, as well as the difficulty of cooperation between competing interests. Other topics such as contaminant fate and transport, dose response and population ecology are also touched on, making Hydrotopia a powerful tool for teaching abstract concepts that are important to environmental science education.

## Pharmaceutical Advisory Group Symposium

### Global Distribution of Pharmaceuticals in the Environment-Implications for Monitoring and Management Strategies

1:00 p.m.-5:00 p.m. | Room 250 DE | Price: \$30

The aim of this half-day symposia is to bring together a number of experts to provide an overview on the current status of knowledge relating to regional differences in the concentrations and classes of pharmaceuticals present in the environment, factors that can influence the use or release of pharmaceuticals in different regions, perceived impacts of pharmaceuticals due to geographical and cultural differences and the ability to transfer knowledge between regions to assist in management of the issue.

#### Speakers

**Thomas Van Boeckel, ETH:** Mapping the global consumption of antimicrobials in animals and humans

**Silke Hickmann, UBA:** The global perspective on pharmaceuticals in the environment—results of a global monitoring database and overview on the discussion of the issue under SAICM

**Jason Snape, AstraZeneca:** An industry approach to safe API manufacturing discharges and its implementation across the supply chain

**Mike Williams, CSIRO:** An examination of ecological risk factors for APIs based on national income

**Norihide Nakada, Kyoto University:** Monitoring of pharmaceuticals in the aquatic environment of Asian countries and factors relating to their occurrence

# Sunday 1 November

## Daily Schedule and Business Meetings

TIME	MEETING	LOCATION
7:00 a.m.–8:00 p.m.	Registration Open	East Registration
8:00 a.m.–5:00 p.m.	<a href="#">Professional Training Courses</a>	see list below
8:00 a.m.–5:00 p.m.	North America Board of Directors	250 CF
9:00 a.m.–10:00 a.m.	Student Activities Committee	150 DE
9:20 a.m.–10:00 a.m.	Coffee Break	
	Lunch Break	
1:00 p.m.–5:00 p.m.	<a href="#">Hydrotopia: An Interactive Game for Environmental Education</a>	250 AB
1:00 p.m.–5:00 p.m.	<a href="#">Pharmaceuticals Advisory Group Symposium (pre-registration required)</a>	250 DE
3:00 p.m.–3:50 p.m.	Coffee Break	
4:00 p.m.–6:00 p.m.	Small Fish Research Team Meeting	151 G
6:00 p.m.–7:30 p.m.	<a href="#">Opening Ceremony featuring Lynn de Freitas</a>	Ballroom ABCD
7:30 p.m.–9:30 p.m.	<a href="#">Opening Reception – Exhibitions and SETAC Store Open</a>	Exhibit Hall

## Professional Training Courses

FULL-DAY COURSES   8:00 a.m.–5:00 p.m.		LOCATION
<b>PT01</b>	Assessing Chemical Risks to Threatened and Endangered Species Using Population Models	251 C
<b>PT02</b>	Leadership 101: DiSC® Training. Evaluate Your Behavior, Strengths and Challenges, and Build Leadership Capacity	251 D
<b>PT03</b>	Pesticide Risk Assessment for Pollinators	251 E
<b>PT04</b>	The Endocrine System: Global Perspectives on Testing Methods and Evaluation of Endocrine Activity	251 F
<b>PT05</b>	Statistical Issues in the Design and Analysis of Ecotox Experiments	151 AB
<b>PT06</b>	Developing and Applying Adverse Outcome Pathways – What You Need to Know	151 DE
MORNING HALF-DAY COURSES   8:00 a.m.–12:00 p.m.		LOCATION
<b>PT07</b>	Hydraulic Fracturing: Data Analysis Tools to Evaluate Environmental and Ecological Risks	150 AB
<b>PT08</b>	Media and Communications Training for Environmental Scientists	151 G
<b>PT09</b>	Exposure and Risk Assessment for Formulated Consumer Products	150 G
AFTERNOON HALF-DAY COURSES   1:00 p.m.–5:00 p.m.		LOCATION
<b>PT10</b>	Science Communication: Using Science Improv to Communicate Science to Everyday People	150 G



**SETAC PHOTO CONTEST**

**VOTE AT [SETAC.ORG/SLC-PHOTO-CONTEST](http://SETAC.ORG/SLC-PHOTO-CONTEST)**

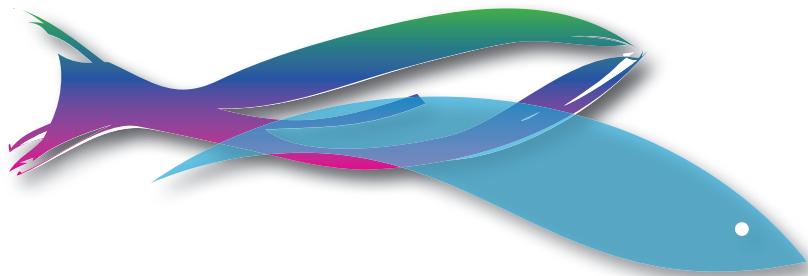
- ▶ Submissions are on display in the SETAC Store.
- ▶ Winners will be announced Tuesday evening.
- ▶ Photos will be made available for bidding in the Silent Auction.

**The presence of vitellogenin in male and juvenile fish serves as a useful biomarker for estrogenic activity of natural and anthropogenic substances in sewage.**

**Measure vitellogenin easily and repeatedly in epidermal fish mucus using:**

**TECO® Cyprinid Vitellogenin ELISA for Serum, Whole Body Homogenate & Mucus**

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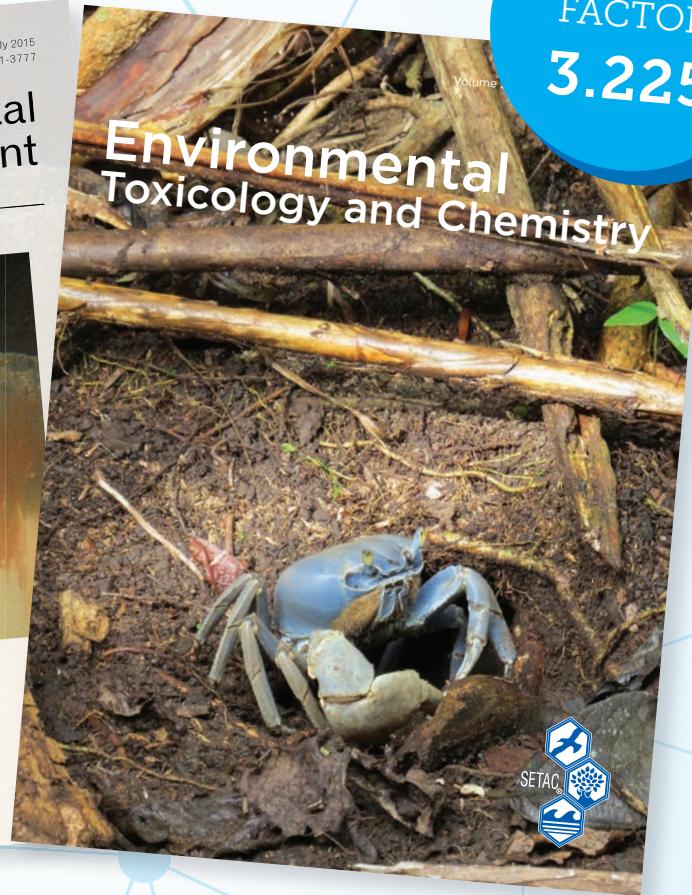
- Non-destructive, non-invasive sampling from epidermal mucosa
- Defined matrix without lymphatic fluid contamination
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# Submit Your Best Research to SETAC Journals!



Join us at the SETAC Journals  
reception to learn more!

Monday, 2 November | 6:30–8:30 p.m. | Room 255A



# Monday 2 November

## General Opening Hours

TIME	AREA	LOCATION
7:00 a.m.–6:00 p.m.	Registration	East Registration
8:00 a.m.–6:30 p.m.	Poster Viewing and SETAC Store	Exhibit Hall
9:00 a.m.–6:30 p.m.	Exhibitions	Exhibit Hall

## Daily Schedule

TIME	EVENT	LOCATION
7:00 a.m.–8:00 a.m.	Poster Setup	Exhibit Hall
7:00 a.m.–8:00 a.m.	<a href="#">New Member Breakfast</a>	Room 254
8:00 a.m.–9:15 a.m.	Morning Platform Sessions	See session listing
9:00 a.m.–6:30 p.m.	<a href="#">Reddit Ask Me Anything</a>	Exhibit Hall
9:15 a.m.–10:00 a.m.	Coffee Break	Exhibit Hall
10:00 a.m.–11:15 a.m.	Morning Platform Sessions cont'd	See session listing
11:15 a.m.–1:00 p.m.	<a href="#">Student/Mentor Lunch</a>	255 DEF
11:15 a.m.–1:00 p.m.	Lunch Break	
1:00 p.m.–2:15 p.m.	Afternoon Platform Sessions	See session listing
2:15 p.m.–3:00 p.m.	Coffee Break	Exhibit Hall
3:00 p.m.–4:15 p.m.	Afternoon Platform Sessions cont'd	See session listing
4:30 p.m.–5:15 p.m.	<a href="#">Keynote Speaker: Jim Cane</a>	Ballroom AC
5:00 p.m.–6:30 p.m.	Poster Social	Exhibit Hall
5:30 p.m.–8:00 p.m.	<a href="#">USEPA CSS STAR Grant Awards Kick Off Session</a>	251 D
9:00 p.m.–until	<a href="#">Meet the President – Mary Reiley</a>	Squatters Pub

## Business Meetings

TIME	MEETING	LOCATION
9:00 a.m.–10:00 a.m.	International Programs Committee	250 CF
10:00 a.m.–11:00 a.m.	Southeast Regional Chapter	151 AB
11:30 a.m.–12:30 p.m.	Global Awards Committee	251 F
12:00 p.m.–1:00 p.m.	North America Science Committee	250 CF
12:00 p.m.–1:00 p.m.	North America Regional Chapters Committee	151 G
12:00 p.m.–2:00 p.m.	ET&C Editorial Luncheon	251 C
12:00 p.m.–2:00 p.m.	Plant Advisory Group Business Meeting	151 DE
1:00 p.m.–3:00 p.m.	Global Partners Committee	250 CF
2:00 p.m.–3:00 p.m.	YES 2016 Planning Committee	151 AB

## Business Meetings cont'd

TIME	MEETING	LOCATION
3:00 p.m.–4:00 p.m.	Northern California Regional Chapter	151 DE
3:00 p.m.–5:00 p.m.	Exposure Modeling Advisory Group	151 G
5:00 p.m.–6:00 p.m.	Ozark-Prairie Regional Chapter	151 AB
6:00 p.m.–8:00 p.m.	Metals Advisory Group Meeting and Reception	253 AB
6:15 p.m.–7:15 p.m.	Post Docs and Recent Graduates Meeting	151 DE
6:30 p.m.–8:30 p.m.	SETAC Journals Reception Hosted by Wiley	255 A



### SETAC Reddit Ask Me Anything (AMA) all day today!

The SETAC North America Student Advisory Council (NASAC) is hosting another Reddit Ask Me Anything (AMA). For those of you unfamiliar with Reddit AMAs, we open the floor to questions

from anyone in the world curious about our science. Questions have ranged from very explicit ("Should I be concerned about mercury levels in fish from the Chesapeake Bay?") to the very peculiar ("How dangerous is pigeon poop?"). Students work with experts and established researchers at the conference to answer these questions. The first AMA in SETAC Vancouver was very successful, but we're hoping it will be even bigger this year.

We are asking members of the society who represent researchers from a variety of disciplines and sectors to answer the questions; the answers are not official SETAC positions.

## Meet the President!

Get to know your SETAC North America President  
**Mary Reiley**  
 Monday at 9:00 p.m.  
 Squatters | 147 Broadway



Select sessions are being recorded at this meeting and will be available online for all attendees at **no additional cost**.

**Look for the  icon beside those sessions that are being recorded.**

[SETAC.sclivelearningcenter.com](http://SETAC.sclivelearningcenter.com) 



# Daily Keynote Speaker

4:30 p.m.-5:15 p.m. | Ballroom AC

## Jim Cane

Researcher, US Department of Agriculture

Jim Cane has spent many of the past 27 years studying the nesting and pollination ecologies of native non-social bees of North America and elsewhere. In this keynote, he will discuss his long-term interest in conservation to help measure, understand and mitigate human factors that can shift nesting and foraging opportunities for bee communities. He has worked with pollination and pollinators of alfalfa, cranberries, blueberries, squashes, almonds, onions, raspberries

and 13+ native seed crops used for restoration seed. He has published on native bee nesting biologies, chemical ecologies, foraging ecologies, floral specializations, community dynamics and conservation. He is currently multiplying five species of native Osmia bees for these applications. For the past 14 years, he has worked for the US Department of Agriculture at the Pollinating Insect Research Unit at Utah State University. Prior, he was on the faculty of Auburn University in Alabama and a post-doc at Berkeley following a Ph.D. from the University of Kansas.

Save the date for TOMORROW's State of SETAC Address from 4:00 p.m.-5:00 p.m. in room 251 C as representatives from SETAC World and SETAC North America outline the state of our Society.

## Follow SETAC on social media!



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Follow us on Twitter  
[@setac\\_world](https://twitter.com/setac_world)  
Use meeting hashtag [#setacslc](#)



Find us on LinkedIn

## Affiliated Activity

5:30 p.m.-8:00 p.m. | Room 215 D

### USEPA CSS STAR Grant Awards Kick Off Session

Systems Based Research for Evaluating Ecological Impacts of Manufactured Chemicals

The US Environmental Protection Agency (USEPA) is providing more than \$4 million to six universities for research to study the ecological impacts of manufactured chemicals, leading to better risk assessments and decisions for protecting environment and ecological system. "The innovative research funded by these STAR grants will provide new approaches to evaluate how exposures to chemicals influence the health of ecological systems, and how these approaches can be used to predict, prevent and mitigate these impacts in the long run," said Thomas A. Burke, USEPA's Science Advisor and Deputy Assistant Administrator of USEPA's Office of Research and Development. "This knowledge will help us more effectively protect the environment from adverse impacts of chemicals over time." The projects announced today will develop and apply innovative methods and models to better understand and predict the biological and ecological consequences of exposures to chemicals in environmental system.

# Monday Morning Platform Presentations

	8:00-8:15	8:20-8:35	8:40-8:55	9:00-9:15
250 AB	<b>Environmental Issues Surrounding the Great Salt Lake</b>   Lee Rawlings 1 Challenges in applying the Clean Water Act to the unique and variable Great Salt Lake   <i>C. Bittner</i>	2 Circulation of water and salt between Gunnison and Gilbert Bays, Great Salt Lake by the railroad causeway: How much is enough?   <i>E. Gaddis</i>	3 Factors Influencing Cyanobacteria Blooms in Farmington Bay, Great Salt Lake, Utah   <i>B. Marden</i>	4 Macroinvertebrate Assemblages and the Health of Great Salt Lake Impounded Wetland Ponds   <i>T. Miller</i>
250 DE	<b>Making Science Matter: Effective Science Communication and Outreach</b>   Sarah Bowman, Sarah Crawford 9 Stakeholder engagement and feedback efforts to increase use of the iCSS ToxCast Dashboard   <i>C. Baghdikian</i>	10 Making Science Matter for Congress: The SETAC NATSCA Reform Dialog Group   <i>S. Cohen</i>	11 Sea grant programs of the Gulf of Mexico oil spill science and outreach: Communicating the impacts of the Deepwater Horizon oil spill   <i>E. Maung-Douglass</i>	12 Biodegradation of Dispersed Oil   <i>R. Prince</i>
251 AB	<b>Complexity Kills the Minnow: How to Predict the Effects of Complex Mixtures Containing Multiple Stressors</b>   Heiko Schoenfuss, Brandon Armstrong, James Lazorchak 17 Effects of fungicide mixtures on growth and reproduction of the amphipod <i>Austrochiltonia subtenuis</i>   <i>H. Vu</i>	18 A More Realistic Assessment of Toxic Effects from Storm Water: Organism Sensitivity to Pulsed Salinity, Pyrethroid Pesticide, and Copper Exposures   <i>P. Arth</i>	19 Assessing the impact of urban-derived contaminants on freshwater mussels using indicators spanning multiple levels of biological organization   <i>P. Gillis</i>	20 Altered aromatase expression in fathead minnow larvae following <i>in situ</i> exposure to an agrichemical pulse   <i>J. Ali</i>
Ballroom AC	<b>Human Exposures to Chemicals in Consumer Products</b>   Yvette Lowney 25 Assessing User Exposure to Consumer Products: Methods Specific to Product Use and Exposure Route to Assess Consumer Health Risks   <i>P. Sheehan</i>	26 California's Safer Consumer Products Program's Approach to Chemical Exposure Assessment   <i>A. Doherty</i>	27 Integrating Near-Field Sources and Pathways into Overall Exposure Modeling of Chemicals in Consumer Products   <i>P. Fantke</i>	28 Chlorinated Volatile Organics in Indoor Air from Consumer Products   <i>W. Doucette</i>
Ballroom B	<b>Advances in National-Level Data for Risk Assessment of Pesticides to Federally Listed Threatened and Endangered Species</b>   Chairs: ----- 33 Inclusion of multiple stressors in determinations of pesticide risk to threatened and endangered species   <i>C. Laetz</i>	34 A refined risk assessment for Kirtland's warbler potentially exposed to flowable chlorpyrifos in the United States   <i>D. Moore</i>	35 Assessment of risks of diazinon to the Kirtland's warbler   <i>K. Garber</i>	36 Endangered species assessment for the shortnose sturgeon: lessons learned for a national assessment process   <i>M. Winchell</i>
Ballroom D	<b>Wildlife Ecotoxicology: Molecular to Community Effects</b>   John Elliott, Nico van den Brink, Miguel Mora 41 Proportions of parasites, malformations and tumors in birds are higher in sites exposed to metal pollution at semiarid shrublands of central Mexico   <i>L. Chapa</i>	42 Fluoride pollution and marsupials: pathology, spatial epidemiology and bioindicators   <i>C. Death</i>	43 Spatial and temporal mercury trends in seabird eggs from Pacific Canada 1968-2012 are due to diet: evidence from sulfur isotopes   <i>J. Elliott</i>	44 Impacts of run-of-river hydropower on food web structure and mercury bioaccumulation in American dippers of coastal British Columbia   <i>V. Norbury</i>
Ballroom E	<b>Fate and Effects of Metals: BLM and Mechanisms of Metals Toxicity</b>   Bill Stubblefield 49 Development of BLM-based Ambient Water Quality Criteria for Nickel following USEPA Guidelines   <i>D. DeForest</i>	50 A review of the bioavailability and toxicity of nickel to aquatic organisms in acute and chronic exposures   <i>R. Santore</i>	51 Development of a marine biotic ligand model for nickel: effect of dissolved organic carbon on Ni toxicity to early life stages in marine invertebrates   <i>T. Blewett</i>	52 Physiological Responses of Coral Reef Organisms to Ocean Acidification and Copper Exposure   <i>G. Bielmyer</i>
Ballroom F	<b>Alternative Approaches for Ecotoxicity Assessments</b>   Teresa Norberg-King, Scott Belanger, Amy Beasley 57 Developmental Effects of 2-hydroxychrysene in Zebrafish ( <i>Danio Rerio</i> ) Embryos   <i>G. Diamante</i>	58 Leveraging Embryonic Zebrafish to Prioritize ToxCast Testing   <i>D. Volz</i>	59 The fathead minnow embryo as an alternative fish species for assessing fish embryo toxicity and teratogenicity   <i>S. Böhler</i>	60 Sample Size Analysis for Acute Toxicity Tests: Size Matters   <i>G. Carr</i>
Ballroom G	<b>Discovering the Causes of Chronic Diseases: Integrating Systems Toxicology and the Exposome</b>   Anthony Macherone 65 Strategies to measure the exposome   <i>A. Macherone</i>	66 Environmental Determinants of Disease Susceptibility   <i>S. Snyder</i>	67 Using "omics" medical information systems and a biorepository "time machine" to "PREDICT" the development of chronic diseases in children.   <i>D. Graham</i>	68 High-resolution metabolomics study of occupational exposure to trichloroethylene   <i>D. Walker</i>
Ballroom H	<b>Recent Advances and Trends in Perfluorochemical Research</b>   Jinxia Liu, Kavitha Dasu, Shoji Nakayama, Marc Mills 73 Aqueous photolysis of a fluorotelomer surfactant used in aqueous film forming foams   <i>L. Troubost</i>	74 Aerobic soil biotransformation of quaternary ammonium fluorinated surfactants generates perfluoroalkyl acids   <i>S. Mejia</i>	75 Aerobic biodegradation potential of fluorinated surfactants, polyfluoroalkyl phosphates (PAPs)   <i>K. Chu</i>	76 Metabolic Pathway Elucidation and Protein Binding of Perfluoroalkyl Phosphonic and Phosphinic Acids (PFPA, PFPIAs) in Rats   <i>S. Joudan</i>
Ballroom I	<b>Plant Contaminant Interactions</b>   William Doucette, Joel Burken 81 Patterns of Radiolabelled Selenium Accumulation, Translocation and Speciation in Selected Plants for Phytoremediation and Biofortification   <i>D. Vinod</i>	82 Ion selectivity and isotope effects during plant uptake and accumulation of perchlorate and nitrate   <i>N. Estrada</i>	83 Bioaccumulation Behavior of Ionogenic Organic Contaminants in Wetland Plants: results of a controlled mesocosm study   <i>Y. Wang</i>	84 The Role of Dissipation Processes in Plants for Modeling Bioaccumulation   <i>P. Fantke</i>
Ballroom J	<b>Fostering Tripartite Research: Perspectives, Opinions and New Approaches</b>   Mark Hanson, Richard Frank, Richard Brain 89 Strengthening Science-based Cooperation   <i>G. Arts</i>	90 Sustaining the SETAC Brand: Experiences with SETAC's Public Outreach Policy   <i>J. Staveley</i>	91 Building Environmental Programming through Tripartite Representation: Successes and Challenges   <i>W. Goodfellow</i>	92 Experiences with Multi-sector Research Collaboration: An Industry View   <i>L. Ortego</i>
Track	<b>Aquatic Toxicology and Ecology</b>	<b>Integrated Env Assessment and Management</b>	<b>Environmental or Analytical Chemistry</b>	<b>Linking Science and Social Issues</b>

# Monday Morning Platform Presentations

10:00-10:15		10:20-10:35		10:40-10:55		11:00-11:15			
<b>Environmental Issues Surrounding the Great Salt Lake   Lee Rawlings</b>									
5 Trace metals in Great Salt Lake wetlands and potential impacts on plant community health   <i>G. Carling</i>		6 Can Alternative Management Strategies for Impounded Wetland Waterfowl Habitat Mitigate Chemical Stressors?   <i>H. Hoven</i>		7 Unionoida mussels and non prosobranch snails in the Jordan River drainage, UT in response to USEPA's ammonia criteria revisions   <i>D. Richards</i>		8 Understanding Nitrogen Dynamics and Organic Matter Sources in the Jordan River   <i>R. Goel</i>			
<b>Making Science Matter: Effective Science Communication and Outreach   Sarah Bowman, Sarah Crawford</b>									
13 Transdisciplinary Approaches to Environmental Science Education: A Case Study from Northern Saskatchewan, Canada   <i>M. Cavallaro</i>		14 Scientific Communication in the Environmental Sciences – It is a Different World   <i>R. Sofield</i>		15 Tox on Tap: A public science initiative   <i>L. D'Silva</i>		16 Students of SETAC: Connecting students on a global level through social media   <i>D. Jevtic</i>			
<b>Complexity Kills the Minnow: How to Predict the Effects of Complex Mixtures Containing Multiple Stressors   Heiko Schoenfuss, Brandon Armstrong, James Lazorchak</b>									
21 Acute and Chronic Effects of Diltiazem in the Fathead Minnow ( <i>Pimephales promelas</i> ) across Dissolved Oxygen Gradients   <i>G. Saari</i>		22 Contribution of PAHs to the teratogenicity of bioavailable Superfund mixtures   <i>A. Bergmann</i>		23 Confirming bioretention effectiveness for treatment of urban stormwater runoff using molecular indicators of cardiovascular toxicity   <i>J. McIntyre</i>		24 Assessment of Chemical and Pathogen Risks at an Urban River   <i>B. Ruffle</i>			
<b>Human Exposures to Chemicals in Consumer Products   Yvette Lowney</b>									
29 Deterministic Exposure Assessment of Ingredients Used in Consumer Cleaning Products in the United States   <i>S. Williams</i>		30 Human Health Risk Assessment of Chloroxylenol in Liquid Hand Soap and Dishwashing Soap Used by Consumers and Health-Care Professionals   <i>L. Yost</i>		31 Asthma Hazard Characterization and Exposure Assessment Approaches for Evaluation of Consumer Product Ingredients   <i>A. Maier</i>		32 Consequences of Azo Dye Exposure on Clostridium perfringens: Human and Environmental Risks   <i>J. Morrison</i>			
<b>&lt;----- Title   Bernalyn McGaughey, Tilghman Hall, George Tuttle, R. Scott Teed, Teung Chin, Kat Maybury</b>									
37 National-level endangered species assessment for chlorpyrifos: aquatic species   <i>J. Giddings</i>		38 National Endangered Species Assessment for Chlorpyrifos: Refined Terrestrial Ecological Risk Assessment   <i>R. Teed</i>		39 Reducing pesticide exposure to threatened and endangered species   <i>S. Hecht</i>		40 Targeted Monitoring to Evaluate the Effectiveness of Streamside Vegetation in Reducing Pesticide Loading to Surface Water   <i>G. Tuttle</i>			
<b>Wildlife Ecotoxicology: Molecular to Community Effects   John Elliott, Nico van den Brink, Miguel Mora</b>									
45 Can ingestion of lead shot and poisons change population trends of three European upland birds: grey partridge, common buzzard, and red kite?   <i>C. Meyer</i>		46 Sub-lethal effects of neonicotinoid pesticides on wood frogs ( <i>Lithobates sylvaticus</i> ) - Mesocosm Exposures   <i>S. Robinson</i>		47 Embryonic development and hatching success in American Kestrels exposed to the brominated flame retardant, TBBPA-BDBPE   <i>P. Henry</i>		48 Hepatic transcriptomic profiling of double-crested cormorants collected from variably contaminated breeding colonies of the Great Lakes   <i>D. Crump</i>			
<b>Fate and Effects of Metals: BLM and Mechanisms of Metals Toxicity   Bill Stubblefield</b>									
53 Site specific toxicity of rare earth elements in the aquatic environment   <i>J. McGeer</i>		54 Using saturation kinetics-based models to predict <i>Hyalella azteca</i> mortality in chronic zinc exposures   <i>L. Wilkinson</i>		55 Can metals bound to assimilable ligands be taken up by phytoplankton?   <i>F. Liu</i>		56 Metal (Ni, Cd and Tl) binding to cytosolic ligands in insects ( <i>Chaoborus punctipennis</i> ) and eels ( <i>Anguilla rostrata</i> ) as determined by SEC-ICPMS   <i>M. Rosabal</i>			
<b>Alternative Approaches for Ecotoxicity Assessments   Teresa Norberg-King, Scott Belanger, Amy Beasley</b>									
61 RTgill-W1 cell line assay for predicting fish acute toxicity: evaluation of a round-robin test   <i>M. Bernhard</i>		62 Ecological Threshold of Toxicological Concern – Fundamentals and Initial Findings from a Comprehensive Assessment of More Than 4000 Chemicals   <i>S. Belanger</i>		63 Shell's Animal Testing Strategy: Fish Testing   <i>C. Meyer</i>		64 The Regulatory Framework for Read-across and Surrogate Use for Hazard Assessment   <i>J. Kneeland</i>			
<b>Discovering the Causes of Chronic Diseases: Integrating Systems Toxicology and the Exposome   Anthony Macherone</b>									
69 Developmental neurotoxicity assessment of chemical mixtures in children   <i>P. Leonards</i>		70 Influence of Selected Trace Metals on Blood FSH, LH, E2 and Prolactin levels in Women with Infertility attending University College Hospital, Nigeria   <i>J. Omotosho</i>		71 Speciated Isotope Dilution Mass Spectrometry Enabling Exposomic Assessment of Children with Autism and Potential Predictive and Diagnostic Testing   <i>S. Kingston</i>		72 Mapping Pathways of Toxicity by systems toxicology: The Human Toxome project   <i>M. Bouhifd</i>			
<b>Recent Advances and Trends in Perfluorochemical Research   Jinxia Liu, Kavitha Dasu, Shoji Nakayama, Marc Mills</b>									
77 In Situ Remediation of Perfluoroalkyl Contaminated Groundwater: Combined Sorption and Oxidation   <i>M. Crimi</i>		78 Analysis of PFAAs in Water using Differential Mobility Spectrometry-Mass Spectrometry   <i>K. Hyland</i>		79 Assessing the Environmental Hazards of and Exposure to Long-overlooked Perfluoroalkyl Phosphonic and Phosphinic Acids (PFPAAs and PFPIAs)   <i>Z. Wang</i>		80 Serum Perfluoroalkyl Substances Concentration in South Korean Infant with Congenital Hypothyroidism   <i>D. Kim</i>			
<b>Plant Contaminant Interactions   William Doucette, Joel Burken</b>									
85 Fate and Metabolism of 2,4-Dinitroanisole in Willow Trees   <i>H. Schroer</i>		86 Mixture Effects on Uptake of Pharmaceuticals and Personal Care Products by <i>Arabidopsis thaliana</i>   <i>S. Nason</i>		87 Tree Diameter and Rooting Morphology Impacts on Phytoscreening for Vapor Intrusion Potential   <i>J. Wilson</i>		88 Tree Properties Influence on in-plant Contaminant Concentrations at Field Sites   <i>J. Burken</i>			
<b>Fostering Tripartite Research: Perspectives, Opinions and New Approaches   Mark Hanson, Richard Frank, Richard Brain</b>									
93 Fostering tripartite research: success stories from Europe   <i>V. Forbes</i>		94 Improving Weight of Evidence for Regulatory Decision-Making: A SETAC Tripartite Perspective   <i>P. Guiney</i>		95 Key cooperations – The influence of Kloas et al. 2009, <i>Toxicological Sciences</i> 107 on ecological risk assessment of atrazine   <i>K. Solomon</i>		96 The Tripartite Experience in Regulatory Risk Assessment: Reflections From Over 20 Years as a Consultant   <i>D. Moore</i>			
<b>Regulatory Directions</b>		<b>Remediation/Restoration</b>		<b>Special Symposia</b>		<b>Terrestrial or Wildlife Toxicology and Ecology</b>			
Track		Ballroom J		Ballroom I		Ballroom H		Ballroom G	
250 AB		250 DE		250 AC		251 AB		Ballroom B	



Presentation will not be recorded.

# Monday Afternoon Platform Presentations

	1:00-1:15	1:20-1:35	1:40-1:55	2:00-2:15
250 AB	<b>Environmental or Analytical Chemistry General - Part 1 Measurements</b>   Miriam Diamond, Liisa Jantunen  97 Assessing Human Exposure to Toxic VOCs: Comparison of Smoke Biomarkers from Blood and Urine Using Data from NHANES 2005-06   <i>J. Rasio</i>	98 Internal exposure levels of halogenated persistent organic pollutants (Hal-POPs) in children with and without asthma- A case-control study   <i>M. Ge</i>	99 Arsenic Speciation in Sediment and Seafood from Oilfield-Contaminated U.S. Gulf Coast Ecosystems   <i>K. Webb</i>	100 Harmful metal pollution in roof deposit materials caused by air transportation   <i>H. Ozaki</i>
250 DE	<b>The Future Scientists of SETAC: Conveying Scientific Information in the Classroom</b>  104 Something from Nothing: Development of Undergraduate and Graduate Environmental Science Curricula   <i>R. Grippa</i>	105 The Future Scientists of SETAC: The Classroom - Field Class - Study Abroad Connection   <i>C. Howard</i>	106 Teaching Introductory Environmental Toxicology   <i>C. Isaacson</i>	107 Classroom-based research laboratories: Engaging undergraduates in environmental toxicology   <i>A. Roberts</i>
251 AB	<b>Integrated and Predictive Methods for Assessing the Presence and Potential Impacts of Contaminants of Emerging Concern</b>   Chairs: ----->			
Ballroom AC	112 A Multi-Agency Effort for Assessing the Occurrence and Biological Impacts of CECs in Support of the Great Lakes Restoration Initiative   <i>D. Ekman</i>	113 Co-occurrence Patterns for Contaminants of Emerging Concern in Tributaries to the Laurentian Great Lakes   <i>M. Brigham</i>	114 Organic Contaminants in Great Lakes Tributaries: Watersheds and Chemicals of Greatest Concern   <i>S. Corsi</i>	115 A survey of resident and caged sunfish in Great Lakes tributaries for effects consistent with exposure to contaminants of emerging concern   <i>H. Schoenfuss</i>
Ballroom B	<b>Pollinators and Agrochemicals</b>   Michelle Hladik, Paul Reibach			
Ballroom D	120 Tracking seasonal and regional changes of pesticides in bee-collected nectar and pollen in urban and suburban environments   <i>Z. Huang</i>	121 Analysis of Pesticides in MG Quantities of Important Pollinator Matrices   <i>R. Smith</i>	122 The Evaluation of Modifications of Methods and Equipment Towards Improvement of the OECD Draft 22-Day Repeat Exposure Larval Honey Bee Methods   <i>M. Patnaude</i>	123 Developing laboratory test methods for evaluating toxicity to solitary bees ( <i>Osmia</i> spp.)   <i>S. Hinarejos</i>
Ballroom E	<b>Assessing Risks of Pesticides to Federally Listed (Threatened and Endangered) Species at a National Level</b>   Amy Blankinship, Cathy Laetz, Nancy Golden			
Ballroom F	128 Setting the Stage: Overview of the Ecological Risk Assessment Process under the ESA and FIFRA   <i>K. Myers</i>	129 Using Data Compiled by FESTF to Support a National Endangered Species Assessment Case Study on Organophosphate Insecticides   <i>A. Frank</i>	130 Use of toxicological data in the assessment of pesticide risk to threatened and endangered species   <i>G. Noguchi</i>	131 Use of species sensitivities distributions and species grouping strategies in national-level endangered species risk assessments   <i>A. Blankinship</i>
Ballroom G	<b>Dealing With Bias in Chemical Risk Assessment</b>   Valery Forbes, Tilghman Hall, Glenn Suter			
Ballroom H	136 We are all biased - that is why we need science in risk assessment - but it can do a better job   <i>P. Calow</i>	137 Bias in Developing Health and Ecological Assessments and Potential Solutions   <i>S. Cormier</i>	138 Compliance with Good Laboratory Practices (GLP) Does Not Guarantee Study Quality   <i>J. Staveley</i>	139 Biased Data and Potential Solutions for Health and Environmental Assessments   <i>G. Suter</i>
Ballroom I	<b>Fate and Effects of Metals: Aquatic Biological Perspectives</b>   Robert Dwyer			
Ballroom J	144 Chronic effects of lead to topsmelt fish ( <i>Atherinops affinis</i> )   <i>E. Reynolds</i>	145 Subchronic toxicity of platinum group elements as determined with the standardized toxicity test (ISO 10872) using the nematode <i>Caenorhabditis elegans</i>   <i>G. Schertzinger</i>	146 Toxicity ameliorating effects of cations and dissolved organic carbon on Thulium toxicity to <i>Hyalella azteca</i>   <i>A. Loveridge</i>	147 Fate of Arsenate (AsV) and its effect on the biomarkers of an aquatic macrophyte <i>Myriophyllum alterniflorum</i> in eutrophic and oligotrophic conditions   <i>M. Krayem</i>
Ballroom K	<b>Terrestrial or Wildlife Toxicology and Ecology General</b>   Ben Barst			
Ballroom L	152 Seasonal differences in the accumulation of polybrominated diphenyl ethers (PBDEs) in migratory and resident songbirds of North and Central America   <i>A. Maldonado</i>	153 Survey of Aflatoxin Contamination in Supplemental Wildlife Corn Feed Sampled throughout the Rolling Plains of Texas   <i>N. Dunham</i>	154 Implications of study design in long-term environmental contaminants monitoring   <i>W. Bowerman</i>	155 Source-sink dynamics of bald eagles in Michigan's Great Lakes ecosystem   <i>K. Simon</i>
Ballroom M	<b>Biomonitoring of Human Exposure Assessment to Xenobiotics</b>   Qian Wu, Alexandros Asimakopoulos			
Ballroom N	158 Association between multi-class xenobiotics exposures and oxidative stress in a population in Saudi Arabia   <i>A. Asimakopoulos</i>	159 A comparative assessment of human exposure to tetrabromobisphenol A and eight bisphenols via indoor dust ingestion in twelve countries   <i>W. Wang</i>	160 Cadmium in Human Urine from an E-Waste Recycling, China and Its Associations with Biomarkers of Oxidative Stress in Local Residents   <i>T. Zhang</i>	161 Measurements of urinary phthalate metabolites in California nail salon workers and comparison to a representative sample of the U.S. population   <i>J. Varshavsky</i>
Ballroom O	<b>Advancements in the Field of Passive Sampling: Unique Applications and Novel Developments - Part 1</b>   Jonathan Challis, David Alvarez			
Ballroom P	166 Actively shaken in situ passive sampler for measuring pore water concentrations of hydrophobic organic compounds   <i>M. Jalalizadeh</i>	167 Monitoring of PAHs with Low Density Polyethylene Films at Two Contrasting Surface Water Sites and Approach for Estimating Sampler Uptake and Kinetics   <i>H. Lord</i>	168 Passive water sampling predicts PAH contamination in signal crayfish, <i>pacifastacus leniusculus</i>   <i>L. Paulik</i>	169 Using passive samplers to improve soil pollutant biodegradation assessments   <i>D. Werner</i>
Ballroom Q	<b>Difficult Substances - Methods and Approaches for Risk Assessment</b>   Frank Gobas, Philip Leber, Paul DeLeo, Karen Eisenreich, Duane Huggett, Anne Kim			
Ballroom R	174 Proceedings from a Collaborative Workshop Discussing Challenges in Characterizing Hazard Associated with Difficult-to-Test Substances   <i>K. Eisenreich</i>	175 Proceedings from a Collaborative Workshop Discussing Challenges in Characterizing Hazard Associated with Difficult-to-Test Substances - Part 2   <i>P. DeLeo</i>	176 What's the Functional Solubility? The challenges and limitations faced when working with Difficult to Test Substances in aquatic matrices   <i>M. Cafarella</i>	177 Along came a SPDR: A novel approach to creating truly dissolved solutions for use in flow-through toxicity testing   <i>B. de Jourdan</i>
Ballroom S	<b>Novel Mechanisms of Nanomaterial Toxicity Through Direct Exposure and/or Indirect Interactions with Environmental Constituents</b>   Chairs: ----->			
Ballroom T	182 Cardiovascular toxicity of nanoparticles to zebrafish ( <i>Danio rerio</i> ) embryos   <i>J. GAO</i>	183 Interference of silver nanoparticles with essential metal homeostasis in a multi-cellular fish <i>in vitro</i> system   <i>M. Minghetti</i>	184 Mechanisms of cellular uptake and sub-cellular localization of nanoparticles   <i>G. Goss</i>	185 Multi-Walled Carbon Nanotubes Alter Toxicities of Diphenhydramine and Diclofenac in Exposures with Sediment and Natural Organic Matter   <i>M. Black</i>
Track	<b>Aquatic Toxicology and Ecology</b>	<b>Integrated Env Assessment and Management</b>	<b>Environmental or Analytical Chemistry</b>	<b>Linking Science and Social Issues</b>

# Monday Afternoon Platform Presentations

3:00-3:15	3:20-3:35	3:40-3:55	4:00-4:15	
<b>Environmental or Analytical Chemistry General - Part 1 Measurements</b>   Miriam Diamond, Liisa Jantunen				
101 Identification of inorganic sources of Houston road dust contamination   <i>M. Fiala</i>	102 Perfluorinated octane acid (PFOA) and Perfluorinated octane sulphonate (PFOS) in top soil of some high density residential areas   <i>B. Ximba</i>	103 Determination of levels of polychlorinated biphenyls (PCBs) present in caulk and window glazing material samples from older buildings   <i>L. Osemwengie</i>	Discussion	
<b>The Future Scientists of SETAC: Conveying Scientific Information in the Classroom</b>   David Ownby, Ruth M. Sofield				
108 Impacts of new teaching, monitoring and reporting techniques on science student success from the perspective of faculty, students and administration   <i>F. Bailey</i>	109 PowerPoint in Biology Classrooms: A Quantitative Analysis of Student and Faculty Perceptions   <i>R. Otter</i>	110 An online alternative to in-class journal article discussions   <i>D. Ownby</i>	111 Environmental Toxicology and Active Learning - The Trials and Tribulations of Trying New Approaches in a Learning Environment   <i>R. Sofield</i>	
<----- Title   Jo Banda, Heiko Schoenfuss, Edward Perkins				
116 Transcriptional Pathway and de novo network-based approaches to effects-based monitoring in the Great Lakes   <i>N. Vinas</i>	117 Characterizing the Bioactivity of Complex Environmental Samples Using High Throughput Toxicology   <i>A. Schroeder</i>	118 Contaminants of emerging concern detected in effluent, estuarine water, and fish in Puget Sound, Washington, USA   <i>J. Meador</i>	119 Tidal Influences on Aquatic Hazards of Pharmaceuticals, Nutrients, and Pathogens in Dickinson Bayou, Texas, USA   <i>W. Scott</i>	
<b>Pollinators and Agrochemicals</b>   Michelle Hladik, Paul Reibach				
124 Chloryprifos and honeybees: Threshold values for sub-lethal memory and learning effects relative to measured amounts in New Zealand honeybees   <i>K. Hageman</i>	125 Distribution of neonicotinoids in the honeybee colony and its significance for risk assessment   <i>J. Purdy</i>	126 Current-use pesticides in native bees collected in 2013 and 2014 from varying land cover areas in Colorado, USA   <i>M. Hladik</i>	127 Longitudinal Analysis of Honey Bee Colony Strength and Survival as a Function of Exposure to Pesticides, Pathogens, and Varroa Mites   <i>S. Kegley</i>	
<b>Assessing Risks of Pesticides to Federally Listed (Threatened and Endangered) Species at a National Level</b>   Amy Blankinship, Cathy Laetz, Nancy Golden				
132 A Weight-of-Evidence Approach for Making Effects Determinations for Federally Listed Species and Pesticides   <i>N. Golden</i>	133 Aquatic Modeling to Estimate Pesticide Exposure to Threatened and Endangered Species   <i>M. Corbin</i>	134 Probabilistic modeling to account for spatial and temporal variability in aquatic pesticide concentrations for endangered species risk assessments   <i>L. Padilla</i>	135 On-going Improvements to the AGDISP Pesticide Drift Model   <i>H. Thistle</i>	
<b>Dealing With Bias in Chemical Risk Assessment</b>   Valery Forbes, Tilghman Hall, Glenn Suter				
140 A Tale of Two Scientific Worlds : a case study with Bisphenol A (BPA)   <i>L. Ortego</i>	141 Industry sponsored; implications of collaborative research   <i>R. Brain</i>	142 Improved understanding through collaboration - European initiatives encouraging interaction between academia and regulators   <i>M. Agerstrand</i>	143 Identifying Conditions for the Legitimacy of Industry Funded Research   <i>K. Elliott</i>	
<b>Fate and Effects of Metals: Aquatic Biological Perspectives</b>   Robert Dwyer				
148 Dynamic behavior and speciation of arsenic at the base of aquatic food webs   <i>A. Harris</i>	149 New findings on mercury neurotoxicity disclosed by oxidative stress profiles in fish brain upon exposure to inorganic and organic mercury forms   <i>P. Pereira</i>	150 Effects of food additions on toxicity of inorganic and methyl mercury to <i>Daphnia magna</i>   <i>C. Hylton</i>	151 Exposure to pollutants in Madín Reservoir (Mexico) induce cyto and genotoxic effects in the common carp <i>Cyprinus carpio</i>   <i>C. Martínez-Vieyra</i>	
<b>Terrestrial or Wildlife Toxicology and Ecology General</b>   Ben Barst				
156 A geographic survey of mercury levels in bats across Canada   <i>J. Chetelat</i>	157 Development of Risk-based Thresholds for Molybdenum in Soil   <i>B. Sample</i>	Discussion	Discussion	
<b>Biomonitoring of Human Exposure Assessment to Xenobiotics</b>   Qian Wu, Alexandros Asimakopoulos				
162 Determination of secondary DEHP metabolites, PFOS and PFOA in breast milk and cord plasma samples from European birth cohorts   <i>M. Lamoree</i>	163 Blood Metal Concentrations in Newcomer Women in Toronto, Canada   <i>C. Wiseman</i>	164 Factors affecting partitioning of halogenated aromatic hydrocarbons among maternal blood, placenta, and cord blood   <i>J. Kim</i>	165 Passive sampling in ambient and individuals' environments in rural Peru   <i>A. Bergmann</i>	
<b>Advancements in the Field of Passive Sampling: Unique Applications and Novel Developments - Part 1</b>   Jonathan Challis, David Alvarez				
170 Polyethylene uptake of gaseous and dissolved hydrophobic organic contaminants   <i>C. McDonough</i>	171 Comparison of two methods commonly used to calculate air concentrations of semi-volatile organic compounds from passive sampler measurements   <i>E. Holt</i>	172 Hydrophobicity driven sorption of neutral and anionic surfactants to solid-phase microextraction fibers   <i>J. Haftka</i>	173 Equilibrium sampling for a thermodynamic assessment of contaminated sediments   <i>P. Mayer</i>	
<b>Difficult Substances - Methods and Approaches for Risk Assessment</b>   Frank Gobas, Philip Leber, Paul DeLeo, Karen Eisenreich, Duane Huggett, Anne Kim				
178 Degradation Testing of Fluorotelomer-based polymers (FTPs)   <i>L. Libelo</i>	179 Challenges in aquatic toxicity testing of Gas-to-Liquid products   <i>D. Lyon</i>	180 Scientific rationale for the evolution of criteria for PBT and POP and cut-off values in national and international regulatory tools   <i>K. Solomon</i>	181 The Problem with Super-Hydrophobic Chemicals   <i>F. Gobas</i>	
<----- Title   Joseph Bisesi, Candice Lavelle, Tara Sabo-Attwood, Lee Ferguson				
186 Photo-induced Toxicity and Interaction of Titanium Dioxide (TiO <sub>2</sub> ) Nanoparticles with Natural Organic Matter (NOM) in Aquatic Systems   <i>A. Wormington</i>	187 Toxicogenomic responses of <i>Medicago truncatula</i> to aged biosolids containing nanomaterials (TiO <sub>2</sub> , Ag and ZnO) from a pilot wastewater treatment plant   <i>O. Tsusyko</i>	188 Defining biomarkers for functionalized gold nanoparticle induced adverse outcomes   <i>J. Bozich</i>	189 Release of Polymer Additives and Plasticizers from CNT-polymer Nanocomposites   <i>M. Montano</i>	
<b>Regulatory Directions</b>		<b>Remediation/Restoration</b>	<b>Special Symposia</b>	<b>Terrestrial or Wildlife Toxicology and Ecology</b>
				Track
				Ballroom J
				Ballroom I
				Ballroom H
				Ballroom G
				Ballroom F
				Ballroom E
				Ballroom D
				Ballroom C
				Ballroom B
				Ballroom AC
				Ballroom B
				250 DE
				250 AB

 Presentation will not be recorded.

# Monday Poster Presentations

## Schedule

Setup 7:00 a.m.–8:00 a.m.

Take Down 6:30 p.m.–6:45 p.m.

Presenters are expected to attend their poster during all break periods and evening poster social to discuss their work with scientists visiting their poster.

Coffee Breaks 9:15 a.m.–10:00 a.m. and 2:15 p.m.–3:00 p.m.

Lunch Break 11:15 a.m.–1:00 p.m.

Poster Social 5:00 p.m.–6:30 p.m.

### Biomonitoring of Human Exposure Assessment to Xenobiotics

Oian Wu, Alexandros Asimakopoulos

**MP001** Analysis of Perfluoroalkyl Substances in Food, Drinking Water, and Indoor Dust from New York State and the Assessment of Human Exposure | *O. Wu*

**MP002** Mercury (Hg) exposure and its influence on the neurodevelopment of Saudi breast-fed infants | *J. Al-Saleh*

**MP003** Organophosphorus and brominated flame retardants in human breast milk from Japan | *T. Kunisue*

**MP004** Temporal trend of PBDEs in Northern California pregnant women | *E. Parry*

**MP005** Biomonitoring of Newcomer Women from South and East Asia in Two Canadian Cities | *M. Curren*

**MP006** Associations of Serum Organohalogen Levels and Prostate Cancer Risk: Results from a case-control study in Singapore | *B. Kelly*

### Advancements in the Field of Passive Sampling: Unique Applications and Novel Developments | Jonathan Challis, David Alvarez

**MP007** Demonstration project using a modified POCIS for monitoring emerging contaminants in a groundwater well | *D. Alvarez*

**MP008** Why Aren't We Using Passive Sampling More Often? – The End-user Perspective | *J. Conder*

**MP009** Comparisons of Discrete and Passive Sampling for Quantitation of Pulsed Exposures to Aquatic Organisms | *S. Morrison*

**MP010** Using Performance Reference Compounds (PRCs) to measure dissolved water concentrations (Cfree) in the water column: Assessing equilibrium models | *A. Joyce*

**MP011** Emerging Organic Pollutants in surface waters in Costa Rica: a first assessment of pollution level using passive sampling | *A. Ledezma*

**MP012** Guidance on using Passive Sampling in Evaluation of Contaminated Sediments and Integration into Management of Contaminated Sediment Sites | *S. Kane Driscoll*

**MP013** Using Passive Samplers to Monitor Contaminant Transport in a PCB-Contaminated Estuary | *M. Benotti*

**MP014** Assessing Recovery, Transport, and Stability for Over 160 Compounds in Silicone Personal Passive Samplers | *S. O'Connell*

**MP015** Organophosphate flame retardants: Calibration and uptake by passive air samplers (GAPS) | *L. Jantunen*

**MP016** Stability of Polycyclic Aromatic Compounds in Polyurethane Foam-type Passive Air Samplers upon O3 Exposure | *N. Jariyasoip*

**MP017** Volatile Losses of Compounds from POM and PDMS Study in Passive Sampling | *S. Yan*

**MP018** Critical micelle concentrations for different surfactants measured with polyacrylate-coated SPME fibers | *J. Haftka*

**MP019** Exploring right hand coiled coil (RHCC) proteins as a matrix for a new passive sampling device for PAHs | *V. Palace*

**MP020** Silicone wristbands detect an individual's pesticide exposures in Africa | *C. Donald*

**MP021** Application of passive sampling technique for monitoring 64 pesticides in surface water in Japan | *Y. Kameda*

**MP022** Passive sampling technique combined with ELISA assay detection for monitoring neonicotinoid insecticides in surface water in Japan | *Y. Kameda*

**MP023** Screening of Halogenated Organic Pollutants in Waste Water Treatment Plants using Passive Sampling and High Resolution Mass Spectrometry | *M. Robson*

### Integrated and Predictive Methods for Assessing the Presence and Potential Impacts of Contaminants of Emerging Concern | Jo Banda, Heiko Schoenfuss, Edward Perkins

**MP024** Assessing potential endocrine disrupting effects of municipal effluents on fathead minnow (*Pimephales promelas*) populations in Southern Saskatchewan | *S. Hanson*

**MP025** Characterization of the endocrine potencies of municipal effluents across Canada using *in vitro* bioassays | *T. Bagatim*

**MP026** Chemical-Gene Interaction Networks for Biological Effects Prediction and Prioritization of Contaminants for Environmental Monitoring and Surveillance | *A. Schroeder*

**MP027** Emerging and Conventional Contaminants Discharging into the Dnieper River, Kyiv, Ukraine | *R. Burgess*

**MP028** Evaluating Impacts of Pulp and Paper Mill Process Changes on Bioactive Contaminant Loading to the St. Louis River, Duluth, MN | *M. Kahl*

**MP029** Life After COPCs: Emerging" Contaminants and Their Potential Role at Superfund Sediment Sites" | *R. Gensemer*

**MP030** Muddy Waters: The role of sediment in CEC fate, transport and bioavailability | *A. Kolok*

**MP031** Reproductive and histopathological effects of municipal wastewater effluent exposure in male and female fathead minnows | *K. Steeves*

**MP032** Sucralose in wastewater effluent and receiving waters in the U.S.: an environmental exposure assessment | *K. Kapo*

**MP033** Time course of hepatic gene expression and plasma vitellogenin protein concentrations in estrone-exposed juvenile rainbow trout (*Oncorhynchus mykiss*) | *H. Osachoff*

### Pollinators and Agrochemicals

Michelle Hladik, Paul Reibach

**MP034** Evidence of time-dependent sorption of clothianidin in soils limiting uptake of residues to corn pollen and canola nectar after multiple applications | *L. McConnell*

**MP035** A Sampling Journey: Collection of Nectar and Pollen from Different Crops | *S. Bondarenko*

**MP036** The Evaluation of Three Milkweed Species for Use in Standard Seedling Emergence and Vegetative Vigor Testing Guidelines | *C. Picard*

**MP037** Assessing the potential effects of chronic thiamethoxam exposure to honey bees: results of a hive feeding study conducted in North Carolina, USA | *M. Feken*

**MP038** Role of the Varroa mite in honeybee (*Apis mellifera*) colony loss: a case study for adverse outcome pathway development with a nonchemical stressor | *R. Milsk*

### Wildlife Ecotoxicology: Molecular to Community Effects

John Elliott, Nico van den Brink, Miguel Mora

**MP039** Effects of Perchlorate in Japanese Quail to Evaluate Avian Two-Generation Toxicity Test Methods for Endocrine Disruption | *M. Quinn*

**MP040** Reproductive, immune, and neuromuscular effects of insensitive munitions in Japanese quail (*Coturnix japonica*) | *A. Jackovitz*

**MP041** Exposure of passerine resident birds to toxic elements deposited with historical and actual mining residues in North of Mexico | *K. Monzalvo*

**MP042** Mercury in Forage Fish from Mexico and Central America: Implications for Fish-Eating Birds | *J. Elliott*

**MP043** A metaanalysis of bird species to determine if migration distance predicts species sensitivity to dioxin-like compounds | *K. Bianchini*

**MP044** Identity of key amino acids in the avian AHR1 ligand-binding domain predicts the in vivo sensitivity of European starlings to dioxin-like compounds | *M. Eng*

**MP045** Halogenated organic compounds identified in California Peregrine Falcons (*Falco peregrinus*) by nontargeted analysis | *E. Hoh*

**MP046** Modeling avian vitellogenesis: Linking sublethal effects of contaminants to adverse reproductive outcomes in birds | *B. Armstrong*

**MP047** Climate correlates and implications for organochlorine contaminants in the Michigan Great Lakes, USA, from 1999 to 2014 | *L. Fuentes*

**MP048** Relative Sensitivity of Passerines to PCBs: Characterizing Species-Specific Suites of Developmental Endpoints | *D. Henshel*

**MP049** Organohalogen Contaminants and Metabolites and Thyroid Hormone and Retinol in Snapping Turtles (*Chelydra serpentina*) From Laurentian Great Lakes Sites | *R. Letcher*

**MP050** Omics approach of proteomic and metabolomic analysis of PCBs toxicity in the dog brain | *K. Takaguchi*

**MP051** Toxicological assessment of polychlorinated biphenyls (PCBs) and hydroxylated PCBs (OH-PCBs) in the brain of dogs using metabolomics approach | *K. Nomiyama*

**MP052** Metabolism and biotransformation of organohalogen compounds in the liver microsomes of cats and dogs | *H. Mizukawa*

### Difficult Substances - Methods and Approaches for Risk Assessment

Frank Gobas, Philip Leber, Paul DeLeo, Karen Eisenreich, Duane Huggett, Anne Kim

**MP053** Evaluation of Leachate from Tire and Road Wear Particles (TRWP) Upflow Percolation Column Tests | *J. Bare*

**MP054** Studying sorptive interactions of surfactants on different hydrophobic phases using reversed-phase HPLC | *J. Hammer*

**MP055** Strategies to reduce the number of fish used in aquatic toxicity tests | *P. Bishop*

**MP056** Evaluation of Alternative Approaches for Measuring n-Octanol/Water Partition Coefficients for Methodologically Challenging Chemicals (MCCs) | *L. Burkhard*

### Groundwater-to-Surface Water Interface Investigation for Sediment Characterization and Ecological Risk Assessment | Daniel Lavoie

**MP057** Characterizing Groundwater Discharge and Contaminant Mass Flux to a Tidal Marine Creek | *J. Frederick*

**MP058** Groundwater-to-Surface Water Interface (GSI) Investigations: Case Studies in Site Characterization using Multiple Techniques | *D. Lavoie*

Track

Aquatic Toxicology and Ecology

Integrated Env Assessment and Management

Environmental or Analytical Chemistry

Linking Science and Social Issues

# Monday Poster Presentations

## Plant Contaminant Interactions

William Doucette, Joel Burken

**MP059** A review of bioaccumulation data in terrestrial plants for organic chemicals: metrics, variability and the need for standardized measurement protocols | *W. Doucette*

**MP060** Biosorption of Nonylphenol by Pure Algae, Field-collected Planktons and Their Fractions | *Y. Ran*

**MP061** Occurrence, distribution and bioaccumulation behavior of contaminants of emerging concern in a full-scale constructed wetland system | *B. Kelly*

**MP062** Phytoforensics: Analytical Techniques for Assessing Plant Contamination | *J. Burken*

**MP063** Role of Plant Leaf Composition in Bioaccumulation of Polychlorinated Biphenyls (PCBs) | *C. Belinga*

## Recent Advances and Trends in Perfluorochemical Research

Jinxia Liu, Kavitha Dasu, Shoji Nakayama, Marc Mills

**MP064** Comparison of Avian PFOS Exposures in Aquatic Habitats Affected by Aqueous Film Forming Foam Releases | *J. Conder*

**MP065** Development of Analytical Methods for Monitoring Degradation Products of 6:2 Fluorotelomer Phosphates in Abiotic Matrices and WWTP Sludge | *R. Van Hoven*

**MP066** In Vivo and In Vitro Isomer-Specific Biotransformation of Perfluoroctane Sulfonamide in Common Carp (*Cyprinus carpio*) | *M. Chen*

**MP067** Isomer-specific biotransformation and partitioning of two perfluoroctane sulfonate (PFOS)-precursors in aerobic soil | *S. Mejia*

**MP068** Novel and established per-/poly-fluoroalkyl substances and bioaccumulation and biomagnification in East Greenland ringed seals and polar bears | *G. Boisvert*

**MP069** Occurrence of Per- and poly-fluoroalkylated substances (PFAs) in surface water, sediment and whole fish homogenates of Ottawa River | *K. Dasu*

**MP070** Perfluorinated compounds and pansteatitis in Mozambique tilapia in Mpumalanga province, South Africa | *J. Bangma*

**MP071** Perfluorinated sulfonic and carboxylic acids and precursors in East Greenland and compared to subpopulations of polar bears from Hudson Bay, Canada | *G. Boisvert*

**MP072** Reproduction and Endocrine Function in Fathead Minnows (*Pimephales promelas*) Exposed to Perfluoroctanesulfonate and Perfluorohexanoic acid | *D. Fort*

**MP073** Routes of Perfluoroctane Sulfonate Uptake in Fish Collected Near a Location of Known Historic Aqueous Film Forming Foam (AFFF) Use | *H. Lanza*

**MP074** Temporal trends of perfluoroalkyl substances in plasma of bottlenose dolphins residing in Sarasota Bay, FL | *M. Houde*

**MP075** The residual levels, spatio-temporal distributions and ecological risks of perfluoroalkyl acids in western Lake Chaohu and its inflow rivers, China | *W. Liu*

## Making Science Matter: Effective Science Communication and Outreach

Sarah Bowman, Sarah Crawford

**MP076** Clemson WOW Project: an outreach program designed by Clemson University Graduate Students | *N. Sengupta*

**MP077** Engaging citizens in science results in large-scale data gathering and scientific literacy | *S. Bowman*

**MP078** How much mercury (Hg) is in our fish? Communicating Hg science and fish consumption recommendations to Northern Communities in Ontario, Canada | *G. Lescord*

**MP079** Tox on Tap: Engaging the community in science | *E. Maloney*

**MP080** Petrica Science Center: A unique model for informal high-school and undergraduate science education and outreach | *T. Mišljenović*

**MP081** Riverpace: Results of a national survey of pharmaceuticals and personal care products in US rivers and streams by university student groups | *J. Becker*

**MP082** Informal Communication of Nanotechnology Research: The Center for Sustainable Nanotechnology Blog | *D. Lohse*

## Environmental Issues Surrounding the Great Salt Lake

Lee Rawlings

**MP083** Evaluation of nutrient and trace element analytical methods for hypersaline waters: Results from the Great Salt Lake Laboratory Round Robin | *T. Hooker*

**MP084** Mercury contamination in three lizard species from Antelope Island in the Great Salt Lake | *K. Killian*

**MP085** Seasonal and longitudinal dynamics of targeted contaminants of emerging concern in East Canyon Creek, Park City, Utah, USA | *S. Haddad*

**MP086** Spatio-temporal bioaccumulation and trophic dilution of pharmaceuticals in East Canyon Creek, Park City, Utah, USA | *S. Haddad*

## Assessing Risks of Pesticides to Federally Listed (Threatened and Endangered) Species at a National Level | Amy Blankinship, Cathy Laetz, Nancy Golden

**MP087** A national scale threatened and endangered species risk assessment process to prioritize assessment refinements for insecticide use patterns | *M. Kern*

**MP088** Ecological Risk Assessment for Threatened and Endangered Species following Pesticide Applications | *J. Sullivan*

**MP089** Permethrin Drift from Truck Application Routes into the Habitat of an Imperiled Butterfly Taxon | *T. Bargar*

**MP090** Refined aquatic exposure methods for species focused threatened and endangered species risk assessments | *N. Snyder*

**MP091** Selection of Effects Data for National Scale Pesticide Endangered Species Assessments | *M. Kern*

**MP092** Species focused co-occurrence and proximity analysis for refined terrestrial exposure estimates for threatened and endangered species risk assessments | *J. Amos*

## Novel Mechanisms of Nanomaterial Toxicity Through Direct Exposure and Indirect Interactions with Environmental Constituents | Joseph Bisesi, Candice Lavelle, Tara Sabo-Attwood, Lee Ferguson

**MP093** Effects of Acute Exposure to Nanoparticulate Metals on the Microbiome of Zebrafish (*Danio rerio*) | *R. Griffitt*

**MP094** Effects of TiO<sub>2</sub> nanoparticles dietary exposure on *Drosophila melanogaster* survival, fecundity, pupation, and antioxidative genes expression | *B. Jovanovic*

**MP095** Examination of the interactions of fish gastrointestinal and plasma proteins with single-walled carbon nanotubes using near infrared fluorescence | *H. Crosby*

**MP096** Exposure of *Arabidopsis thaliana* to Zero-valent Iron Nanoparticle Induces the Enhancement of Biomass as a Result of Promoted Photosynthesis | *J. Kim*

**MP097** Impacts of fish gastrointestinal system pH on single-walled carbon nanotube-ethynil estradiol sorption behavior | *T. Ngo*

**MP098** Size and functionalization of nanodiamonds induces oxidative stress, lipid peroxidation and antioxidant gene expression in the gut of *Daphnia magna* | *G. Dominguez*

**MP099** Systematic Analysis of Silver Nanoparticle-Induced Mitochondrial Toxicity: Size-Specific and Coating-Specific Effects | *L. Kubik*

**MP100** The fish gastrointestinal system as a toxicant target: Identification of novel toxic mechanisms of nanomaterials and legacy pesticides using RNASeq | *J. Bisesi*

**MP101** Toxicity effects of metal-based nanoparticles towards two estuarine invertebrates: *Scrobicularia plana* and *Hediste diversicolor* | *A. Chatel*

**MP102** Viral Interactions with Carbon Nanomaterials in the Aquatic Environment; Implications for Fish Toxicity | *C. Lavelle*

## Fate and Effects of Metals

Bill Stubblefield

**MP103** Agricultural Land Usage and Detection of Lead in the Cache River Watershed | *M. Kilmer*

**MP104** As<sub>2</sub>O<sub>3</sub> induces oxidative stress in gill, liver, brain and blood of *Cyprinus carpio* | *L. Bernadac-Villegas*

**MP105** *Daphnia magna* immobilization assay application to toxicity of metal sulfate and the effect of chelate in medium | *T. Abe*

**MP107** Detection of Lead (Pb<sup>2+</sup>) in the Lower Cache River Watershed, AR | *C. Rosado-Berrios*

**MP108** Embryotoxicity of maternally-transferred methylmercury to fathead minnows (*Pimephales promelas*) | *K. Bridges*

**MP109** Evaluating the Effects of Groundwater Nitrate/Hexavalent Chromium on Salmonids in the Columbia River | *C. McCarthy*

**MP110** Evaluation of Multiple Linear Regression (MLR) Models for Predicting Chronic Aluminum and Iron Toxicity to Freshwater Aquatic Organisms | *D. DeForest*

**MP111** Major-Electrolyte Depletion in *Daphnia magna* Exposed to Mining-Influenced Water | *E. Traudt*

**MP112** Maternal Transfer of Essential and Nonessential Metals in a Thresher Shark | *J. Dutton*

**MP113** Modeling Mercury Flow Dynamics and Bioaccumulation along East Fork Poplar Creek (EFPC) in Tennessee | *M. Balaji Bhaskar*

**MP114** Nickel effects on benthic macroinvertebrate community composition in field-contaminated sediments | *R. Mendonca*

**MP115** Organic Arsenic Trends Naturally Found in Seafood | *G. Greenberg*

**MP116** Predicting aluminum toxicity as a mixture of effects from dissolved and precipitated metal | *R. Santore*

**MP117** Using *Eichhornia crassipes* as an alternative to grow *Pleurotus ostreatus* | *M. Castañeda Antonio*

**MP118** A Wetland Case Study: Connecting Toxicity and Chemistry Through Multiple Lines of Evidence | *C. Ray*

**MP119** Bioaccumulation of cadmium in invertebrates along the Buffalo National River due to historic lead and zinc mining operations | *J. McCauley*

**MP120** Contamination and Multi-Decay of Reservoir-Liberated Mercury in a Downstream Fishery: Effects of Fish Trophic Level, Size, and Age | *D. Green*

**MP121** Comparing the chronic toxicity of binary metal mixtures between *Ceriodaphnia dubia* and *Pimephales promelas* | *K. Newton*

# Monday Poster Presentations

## Bioavailability: 21st Century Nexus Between Site Characterization, Risk Assessment and Remediation | Glenn Hoeger, Nicholas Basta

**MP122** Using Bioaccessibility Data for Site-Specific Adjustments to Bioavailability for Dioxins in Soil: A Case Study | *Y. Lowney*

**MP123** Urban Park soils metals distribution and bioaccessibility in Greater Victoria, BC, Canada | *M. Dodd*

**MP124** Arsenic soil bioaccessibility used to refine soil cleanup levels at a historic smelter facility | *J. Clark*

**MP125** Evaluation of Dermal Absorption of PAHs from Soils Impacted by Clay Target Fragments for Application in Human Health Risk Assessment | *G. Hoeger*

**MP126** Rhamnolipid Biosurfactant and Linoleic Acid Amendment Effects on Bioavailability of PAHs in Soil | *D. Wolf*

**MP127** Effect of Source Material on PAH Bioavailability to Humans and Ecological Receptors | *H. Xia*

**MP128** Understanding the Effects of Aging on the Bioavailability of Legacy Contaminants in Marine Sediments | *A. Taylor*

## Alternative Approaches for Ecotoxicity Assessments

Teresa Norberg-King, Scott Belanger, Amy Beasley

**MP129** Life stage terminology in regulatory test guidelines: Improvements for harmonization | *M. Embry*

**MP130** The fathead minnow embryo normal development | *S. Böhler*

**MP131** Additional endpoints for the fathead minnow FET test: Evaluation of growth, developmental and gene expression metrics | *M. Sellin Jeffries*

**MP132** Use of High Accuracy QSARs for reliable regulatory endpoint predictions and further uses in environmental risk assessment | *P. Thomas*

**MP133** Acute fish toxicity QSARs are useful in predicting fish embryo toxicity | *S. Belanger*

**MP134** Assessing Uncertainty of Interspecies Correlation Estimation Models for Aromatic Compounds | *A. Bejarano*

**MP135** Determination of Physical-Chemical Domains for High-Throughput Screening of Ecotoxicological Hazards of Substances | *C. Lehman*

**MP136** Application of passive dosing and quantitative structure-activity relationships to characterize aromatic hydrocarbon toxicity to zebrafish | *J. Butler*

**MP137** An In Silico Approach for the Prediction of Estrogenic Bioactivation of Environmental Chemicals | *C. Pinto*

**MP138** Assessment of Potential Ecological and Health Impact of Coal Ash Spill in Dan River North Carolina | *X. Wen*

**MP139** Estimating baseline toxicity and in vivo and in vitro bio-partitioning of complex mixtures of nonpolar analytes using GCxGC | *D. Nabi*

**MP140** Hazard assessment of Chlorantraniliprole and its Formulated Product Altacon® to Ceriodaphnia dubia using a population-level approach | *J. Stark*

**MP141** Toxicity in the absence of inbreeding: Aquatic pollution-induced deformities in the cosmopolitan chironomid Paratanytarsus grimmii | *B. Gagliardi*

## Impacts of Naturally Occurring, Catastrophic Events on Ecosystems

Thomas Deardorff

**MP142** Mercury mobilisation from burnt soils and ashes after a wildfire and rainfall events: effect of vegetation type and fire severity | *P. Pereira*

**MP143** Post-Wildfire Consequences on Watershed Hydrology and the Environment | *P. Shaller*

**MP144** Risk Factors that Reset the Ecological Process of a Forest Ecosystem: Causes of California Wildland Fires | *T. Deardorff*

## Advances in National-Level Data for Risk Assessment of Pesticides to Federally Listed Threatened and Endangered Species | Bernaly McGaughey, Tilghman Hall, George Tuttle, R. Scott Teed, Teung Chin, Kat Maybury

**MP145** Exploring a Mechanism to Access Existing and Localized Best Available Data for National Pesticide Risk Assessment | *D. Campana*

**MP146** National Endangered Species Assessment for Diazinon: Screening-level Ecological Risk Assessment | *R. Bretton*

**MP147** National Endangered Species Assessment for Malathion: Refined Aquatic and Terrestrial Ecological Risk Assessment | *R. Teed*

**MP148** A refined ecological risk assessment for the California Red-Legged Frog potentially exposed to malathion | *R. Bretton*

**MP149** A refined ecological risk assessment for the delta smelt potentially exposed to malathion in California | *R. Bretton*

## Fate and Effects of Chemicals from Diffuse Sources and Stormwater

Kevin Rader, Robert Gensemer

**MP150** Organochlorine pollutants in Escambia Bay, Florida: Origin and potential impacts | *J. Liebens*

**MP151** Performance of Commercial Ion Exchange Resins for Enhanced Copper Removal in Bioretention Media | *K. Hauser*

**MP152** Pollutant Removal Efficiencies of Self-Converted Dry Detention Ponds in Baltimore County, MD | *R. Owen*

**MP153** Biosolids as a Concentrating Process for Diffuse PCB Sources in an Urban Environment | *T. Needham*

## Human Exposures to Chemicals in Consumer Products

Yvette Lowney

**MP154** USEPA's Safer Choice Program evaluation of ingredients within personal care products | *J. Suski*

**MP155** A Suite of Integrated Predictive Models for the Evaluation of Consumer Exposures to Organic Chemicals in Paper Products | *M. Posson*

**MP156** Assessing Formaldehyde Exposure from Consumer Hair Care Products | *M. Posson*

**MP157** Assessing Incidental Hand-to-Mouth Exposure to lead from Consumer Products | *R. Kalmes*

**MP158** Wearable Technology Products and Allergic Contact Dermatitis: Chemical Exposure and Risk Assessment Challenges & Developments | *A. Singhal*

**MP159** What is the purpose of ingredients used in household cleaning products? A study on the distribution of functions for ingredients in products | *C. Pacelli*

## Aquatic Toxicology and Ecology General - Part 1

Scott Belanger

**MP160** An Experimental Design for a 150-Day Fathead Minnow (Pimephales promelas) Full Life-Cycle Exposure | *J. Marini*

**MP161** Assessment of human-associated fecal bacteria markers in stormwater outfalls | *M. Stallard*

**MP162** *Aurelia aurita*: a prospective pelagic bioindicator | *M. Lowder*

**MP163** Deciphering Causes of Biological Impairment in a Heavily Urbanized Watershed | *J. Diamond*

**MP164** Determining the Presence and Survival of Fecal Bacteria in Murfreesboro, Tennessee USA Storm Drains | *S. Youngman*

**MP165** Development of a monitoring tool for the Saint John Harbour using caged blue mussels (*Mytilus* spp.) | *V. McMullin*

**MP166** Development of Amine Oxide Specific QSARs for Aquatic Toxicity | *J. Brill*

**MP167** Ecological Effects and Ecotoxicity Benchmarks for Hypoxia | *M. Shibata*

**MP168** Effects of Natural Sources on Nutrient Levels in Altered and Unaltered Streams | *S. Chappell*

**MP169** Effects of Water Hardness on Bacterial Attachment to Fine Sand | *L. Jarnagin*

**MP170** Effects of water hardness on the swimming performance and metabolic status of freshwater fish species | *A. Manek*

**MP171** Environmental Factors that Affect Target Susceptibility to Bti Endotoxins | *J. Iburg*

**MP172** Evaluation of whole mount *in situ* hybridization as a tool for pathway-based toxicological research in early life stage fathead minnows | *J. Cavallin*

**MP173** Generation of *Tg(cyp1a: gfp)* transgenic zebrafish for development of a chemical screening platform for aryl hydrocarbon receptor activity | *C. Li*

**MP174** *Hyalella azteca* population level endpoints for assessment of ecotoxicological stress | *M. Flynn*

**MP175** Indicating Water-Quality Conditions in Connected Depressions Using Macroinvertebrate and Diatom Assemblages in the Mississippi Alluvial Plain | *J. Bouldin*

**MP176** Natural variability in reference site mussel samples: An annual and seasonal analysis | *A. Hills*

**MP177** Population Dynamics of *Parhyale hawaiensis* (Crustacea: Amphipoda) in wild and laboratory culture. Endpoints for an ecotoxicity test | *M. Flynn*

**MP178** Predicting energy content and fish condition of juvenile rainbow trout (*Oncorhynchus mykiss*) using bioelectrical impedance analysis | *J. Durante*

**MP179** Quantifying contaminants in Bear Creek sediment: Validation of novel analytical techniques and implications for risk assessment | *S. Hartzell*

**MP180** Recovery of the intertidal communities in Howe Sound: 25+ years of monitoring data analysis and modeling | *S. Bard*

**MP181** Refinement of Harbor Sediment Samples to Characterize Toxicity and Bioaccumulation under USACE's and USEPA's Ocean Disposal Methodology | *M. Bowersox*

**MP182** Setting River Zone Specific Water Quality Objectives for the Rum Jungle Rehabilitation Project | *R. Smith*

**MP183** Using carbon dioxide as a barrier to prevent bigheaded carp movement | *R. Erickson*

**MP184** Zebra Mussels as Bioindicators of Habitat Quality | *M. Lowder*

**MP185** Determination of Acute and Sub-Chronic Toxicity of Emerging Contaminants in Early Life Stages of Rainbow Trout (*Oncorhynchus mykiss*) | *D. Schultz*

**MP186** Toxicology assessment of water samples: A portable device based on phytoplankton chlorophyll fluorescence emission | *M. Perron*

Track
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Aquatic Toxicology and Ecology

Integrated Env Assessment and Management

Environmental or Analytical Chemistry

Linking Science and Social Issues

# Monday Poster Presentations

## Environmental or Analytical Chemistry General - Part 1

**MP187** Analysis of Pesticides from Farm-Raised Catfish in Mississippi | *S. Boone*  
**MP188** Brominated/chlorinated dibenz-p-dioxins and dibenzofurans in soils from Agbogbloshie e-waste recycling site in Accra, Ghana | *T. Matsushita*  
**MP189** Chemical Characterization of Vermicomposted Agroindustrial Wastes | *L. Pigatin*  
**MP190** Concentration of pesticides in the ground water of Merida Metropolitan Area in Yucatan, Mexico | *E. Norena-Barroso*  
**MP191** Contamination status of brominated flame retardants in house dust from Japan and risk assessment for humans | *R. Nishimura*  
**MP192** Current Efforts by NIST to Produce Environmental Matrix Reference Materials Certified for Organic and Inorganic Contaminants | *J. Kucklick*  
**MP193** Hebei Spirit Oil Spill and its environmental impacts – Six years after the spill | *M. Kim*  
**MP194** Influence of Traffic Volume on the Distribution of Metals and PAHs in Soils and Plants along Roadways in Victoria, Canada | *C. Ghimire*  
**MP195** Occurrence and distribution of legacy pops and emerging organic contaminants in a tropical reservoir | *Q. Wang*  
**MP196** Persistent organic pollutant and sterol distributions in the offshore East China Sea influenced by the low salinity water mass | *M. Kim*  
**MP197** Potential impacts to perennial springs from tar sand mining, processing, and disposal on the Tavaputs Plateau, Utah, USA | *L. Frederick*  
**MP198** Presence of Third-Generation Antifouling Biocides in Brazilian Ports | *L. Diniz*  
**MP199** Spatial and Temporal Distributions of Mosquito Adulticides in Houston during Spraying Season | *A. Clark*  
**MP200** The role of microRNAs in diazinon-induced infertility in *C. elegans* | *J. Cobb*  
**MP201** Time Trend of Polybrominated Diphenyl Ethers (PB-DEs) in Serum of the Korean General Population | *J. Kim*  
**MP202** Transformation of proteinaceous compounds by peroxymonosulfate | *J. Pedersen*  
**MP203** Twenty years of air-water gas exchange observations for pesticides in the western Arctic Ocean | *L. Jantunen*  
**MP204** Understanding the atmospheric pressure ionization of petroleum components: the effects of size, structure, and presence of heteroatoms | *A. Huba*  
**MP205** UV-induced degradation of complex polycyclic aromatic hydrocarbon mixtures under accurately emulated terrestrial conditions | *P. Hoffman*  
**MP206** Water solubility measurements of atrazine and fipronil, in freshwater and seawater | *P. Saranjampour*  
**MP207** Evaluation of Exposures to Naturally Generated Diacetyl and 2,3-Pentandione from Thermally Processed and Fermented Food Products | *L. Liang*

## Linking Science and Social Issues General

**MP208** Development of an online platform to promote environmental public health within citizen scientists | *D. Rohlman*  
**MP209** Engaging rural citizen scientists to explore impacts of fracking on ambient air | *D. Rohlman*  
**MP210** Finding the Future of Food | *A. Berardy*  
**MP211** Pesticides in surface water: Can citizen science help collect the data scientists need? | *M. Rakestraw*  
**MP212** Promoting environmental health education in a Native American community through the lens of First Foods | *D. Rohlman*  
**MP213** Racial/Ethnic Disparities in Cumulative Phthalates Exposure Among U.S. Reproductive-age Women: Findings from NHANES 2001-2012 | *J. Varshavsky*  
**MP214** Support for State-level risk management in the absence of Federal guidance: StateHELP | *A. Willis*

**MP215** Sustainability Assessment of a National Bioeconomy: Approaches and Tools to Evaluate Emergent Properties | *B. Walton*

**MP216** The Penobscot River and Environmental Contaminants: Assessment of Tribal Exposure through Sustenance Lifeways | *C. Orazio*

**MP217** Words Matter – Presenting Science-Based Information to the Public | *L. Kapustka*

## Regulatory Directions General

**MP218** Concentrations of Selected Elements in Unfinished Wood and Other Natural Materials | *A. Willis*

**MP219** Considerations for conducting higher tier pulse duration tests to simulate realistic exposure patterns for aquatic risk assessments | *A. Samel*

**MP220** The Crystalline Silica Conundrum in the Classification of Products Using the Globally Harmonized System for Classification and Labelling of Chemicals | *A. Lewis*

**MP221** Uncertainties of USEPA's New Standard Default Factors on Toxicity Assessment | *C. Julias*

## Terrestrial or Wildlife Toxicology and Ecology General | Ben Barst

**MP222** A probabilistic risk assessment model for bird species foraging in corn and soybean fields with different tillage practices | *D. Moore*

**MP223** Assessment of Fungicidal Activity of Relevant Metabolites of a Phenylamide Fungicide | *G. Nallani*

**MP224** Cadmium in gulls: A global overview | *W. Espejo*

**MP225** Characterizing contaminant exposure of mountain plovers on wintering grounds in California and breeding grounds in Colorado, Wyoming, and Montana | *K. Dickerson*

**MP226** Declines in Butterflies and Insectivorous Birds in Areas of High Pesticide Use in California's Central Valley | *H. van Vliet*

**MP227** Distribution of metals in tissues of a potentially threatened and nearshore population of Australian humpback dolphins (*Sousa sahulensis*) | *L. Weijis*

**MP228** Ecological Preliminary Remediation Goals for Soils at the Los Alamos National Laboratory | *R. Rytty*

**MP229** Effect of cadmium bioavailability in food on its compartmentalization in carabids | *A. Bednarska*

**MP230** Estimation of the tissue levels of amitraz in treated West African Dwarf Sheep using thin layer chromatography and spectrophotometry | *S. Anika*

**MP231** GLMs, CCAs, and SEMs, Oh My! How Using Advanced Statistical Techniques May Improve Your Ecotoxicological Research | *N. Michel*

**MP232** Landscape Analysis of Metals, Radionuclides and Chemicals in Western Bluebird (*Sialia Mexicana*) Eggs around Los Alamos National Laboratory | *S. Gaukler*

**MP233** Pesticides in Shorebird Eggs Collected from National Wildlife Refuges in Oregon and Washington | *K. Kuivila*

**MP234** Preliminary environmental fate data for a sprayable RNA-based Biocontrol to control Colorado potato beetle | *N. Peranginangin*

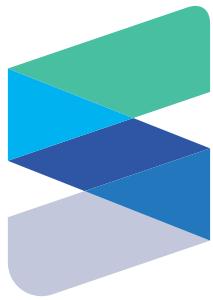
**MP235** Preliminary screening data for a sprayable RNA-based biocontrol for Colorado potato beetle informs environmental risk assessment | *A. Burns*

**MP236** Retrospective Analysis of the Passerine Acute Oral Toxicity Data Requirement of the United States Environmental Protection Agency | *M. Radtke*

**MP237** Use of a Web-Based Interactive Database for Developing Protective Concentration Levels for Wildlife | *B. Yates*

**MP238** Utility of Bioassays comparing the biological activity of an active ingredient and its metabolites | *B. Sharma*

**MP239** Zinc in gulls: A Review of published data | *W. Espejo*



# SETAC Europe CERTIFICATION OF ENVIRONMENTAL RISK ASSESSORS

# The SETAC Europe CRA Programme



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## NOTES

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SMITHERS VISCIENT  
PRESENTERS & CHAIRED SESSIONS

**Poster:** An Experimental Design for a 150-Day Fathead Minnow (*Pimephales promelas*) Full Life-Cycle Exposure  
Presented by Joseph Marini

## SESSION: POLLINATORS AND AGROCHEMICALS

SESSION CHAIRED BY DR. PAUL REIBACH

**Platform and Poster:**  
Age-related sensitivity of three common sediment assay organisms exposed to a representative pyrethroid insecticide  
Presented by Michael Bradley

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## SESSION: AQUATIC TOXICOLOGY AND ECOLOGY

**Poster:** The Evaluation of Three Milkweed Species for Use in Standard Seedling Emergence and Vegetative Vigor Testing Guidelines  
Presented by Christian Picard

**Platform:** The Evaluation of Modifications of Methods and Equipment Towards Improvement of the OECD Draft 22-Day Repeat Exposure Larval Honey Bee Methods  
Presented by Dr. Michael Patnaude

## SESSION: CONTINUING EVOLUTION OF SEDIMENT TOXICITY METHODS AND DATA INTERPRETATION

SESSION CHAIRED BY CHRISTIAN PICARD

# Tuesday 3 November

## General Opening Hours

TIME	AREA	LOCATION
7:00 a.m.–6:00 p.m.	Registration	East Registration
8:00 a.m.–6:30 p.m.	Poster Viewing and SETAC Store	Exhibit Hall
9:00 a.m.–6:30 p.m.	Exhibitions	Exhibit Hall

## Daily Schedule

TIME	EVENT	LOCATION
7:00 a.m.–8:00 a.m.	Poster Setup	Exhibit Hall
7:00 a.m.–8:00 a.m.	<a href="#">Senior Resource Group Second Annual Meet and Greet</a>	251 C
8:00 a.m.–9:15 a.m.	Morning Platform Sessions	See session listing
9:15 a.m.–10:00 a.m.	Coffee Break	Exhibit Hall
10:00 a.m.–11:15 a.m.	Morning Platform Sessions cont'd	See session listing
11:15 a.m.–1:00 p.m.	<a href="#">Women in SETAC Luncheon (ticket required)</a>	254
11:15 a.m.–1:00 p.m.	Lunch Break	
1:00 p.m.– 3:00 p.m.	<a href="#">Hydrotopia Game – Reflection Session</a>	151 G
1:00 p.m.–2:15 p.m.	Afternoon Platform Sessions	See session listing
2:15 p.m.–3:00 p.m.	Coffee Break	Exhibit Hall
3:00 p.m.–4:15 p.m.	Afternoon Platform Sessions cont'd	See session listing
4:00 p.m.–5:00 p.m.	<a href="#">State of SETAC Address: SETAC Global and North America Outline of the State of Our Society</a>	251 C
4:30 p.m.–5:15 p.m.	<a href="#">Keynote Speaker: David Montgomery</a>	Ballroom AC
5:00 p.m.–6:30 p.m.	Poster Social	Exhibit Hall
7:00 p.m.–11:00 p.m.	<a href="#">Tuesday Night Social (ticket required)</a>	Keys on Main

## Business Meetings

TIME	MEETING	LOCATION
7:00 a.m.–8:30 a.m.	ASTM Subcommittee E50.47 on Environmental Fate and Effects	251 F
7:15 a.m.–8:00 a.m.	South Central Regional Chapter	151 DE
8:00 a.m.–9:00 a.m.	Global Communications Committee	151 AB
8:00 a.m.–9:30 a.m.	Exhibitor Meeting	254
9:00 a.m.–11:00 a.m.	Publications Advisory Committee	151 AB
9:00 a.m.–10:30 a.m.	North America Chemistry Advisory Group Meeting	251 E

Please join us for the final bidding of the Silent Auction tonight at 6:00 p.m. in the Exhibit Hall.  
 This fundraising event benefits student activities and student members at the meeting.

## Business Meetings cont'd

TIME	MEETING	LOCATION
11:00 a.m.–12:00 p.m.	North America Endowment Fund Board of Trustees	250 CF
11:00 a.m.–12:00 p.m.	SETAC Globe	151 AB
11:30 a.m.–12:15 p.m.	North America Meetings Committee	151 G
11:30 a.m.–12:30 p.m.	Mid-South Regional Chapter	151 DE
11:30 a.m.–1:30 p.m.	Endocrine Disrupter Testing and Risk Assessment Advisory Group	251 F
12:00 p.m.–1:00 p.m.	Pacific Northwest Regional Chapter	150 G
12:00 p.m.–1:00 p.m.	TSCA Reform Dialogue Group	251 D
12:00 p.m.–2:00 p.m.	IEAM Editorial Luncheon	251 C
1:00 p.m.–2:00 p.m.	Global Finance Meeting	250 CF
1:00 p.m.–2:00 p.m.	Chesapeake Potomic Regional Chapter	151 AB
1:00 p.m.–5:00 p.m.	North America LCA Advisory Group Roadmapping Workshop	251 E
2:00 p.m.–3:00 p.m.	Scientific Integrity Sub-Committee	151 DE
2:00 p.m.–3:00 p.m.	North America Finance Meeting	250 CF
2:00 p.m.–3:00 p.m.	NASAC Face-to-Face Meeting	150 G
3:00 p.m.–4:30 p.m.	WERF CEC6R12 Project Meeting	251 D
5:00 p.m.–6:00 p.m.	North America Board of Directors Meeting	250 CF
5:30 p.m.–6:30 p.m.	Sustainability Advisory Group	151 AB
6:30 p.m.–7:30 p.m.	Global Soils Advisory Group	151 DE
6:30 p.m.–8:00 p.m.	Animal Alternatives Advisory Group	150 G



## Daily Keynote Speaker

4:30 p.m.–5:15 p.m. | Ballroom AC

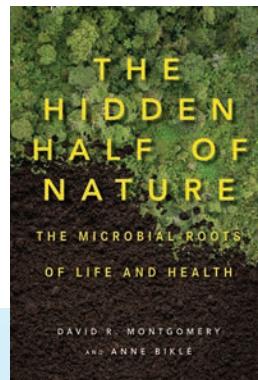
### David Montgomery

Professor of Geomorphology, University of Washington

David Montgomery is a MacArthur Fellow and Professor of Geomorphology in the Department of Earth and Space Sciences at the University of

Washington. Montgomery will discuss our tangled relationship with microbes and their potential to revolutionize agriculture and medicine. He received his B.S. degree in Geology at Stanford University and Ph.D. in Geomorphology at UC Berkeley. His research interests involve the effects of geological processes on ecological systems and human societies and interactions among climate, tectonics and erosion in shaping

topography on Earth and Mars. He has published more than 200 scientific papers, four technical books and is a three-time winner of the Washington State Book Award for "The Rocks Don't Lie," "Dirt" and "King of Fish." His newest book, "The Hidden Half of Nature: The Microbial Roots of Life and Health," was just released this month by W.W. Norton & Co. and is co-authored with his wife, Anne Biklé.



Please join us immediately after his presentation at the SETAC Store in the Exhibit Hall for a book signing with David Montgomery, featuring his brand new book!

final voting for the  
**GLOBAL PHOTO CONTEST**  
 today at 4:00 p.m.



# Women in SETAC Luncheon

Risk – Conquering Fear and Embracing Disruption

11:15 a.m.–1:00 p.m. | Room 254 | \$30 for students/\$50 regular

## Carine Clark

**President and CEO at MaritzCX**

Clark has decades of experience building successful software companies. Prior to MaritzCX, she was president and CEO for Allegiance. She played a crucial role in creating and executing the acquisition of Allegiance by Maritz Research and combining the two companies to create MaritzCX. As SVP and CMO for Symantec, Clark was responsible for global campaign and field marketing, partner and product marketing, branding and marketing communications, as well as public relations and analyst relations. As an executive at Altiris and Novell, she was responsible for driving top and bottom-line company growth through fiscally accountable and operationally efficient marketing. Her leadership helped establish Altiris as one of the fastest-growing technology companies in the world, growing revenues from \$62 million to \$230 million during a four-year period.

Risk is nothing new to Clark. From leaving a successful role as CMO at Symantec to taking a job with no title, no budget and half the salary earlier in her career. Throughout it all, Clark has

embraced these challenges with enthusiasm and humility. She is a healthy cancer survivor who underwent rigorous chemotherapy to battle her illness and considers herself an incredibly lucky human.

Throughout her career, Clark has directed and integrated diverse teams including product management, sales support, alliance, field and global marketing, events, brand and communications management. She has demonstrated expertise in bringing companies and people together through dozens of acquisitions with the exceptional ability to quickly promote best practices and to drive integrated teams toward common goals.

Clark has been recognized with numerous awards, including being named 2015 CEO of the Year by Utah Business magazine. She was ranked by ExecRank as #47 of all CMO's worldwide in 2012. She has also received the Women Tech Leadership Excellence Award, the 25<sup>th</sup> Annual TWIN Award and the Silicon Slopes v100 Award. Clark received her bachelor's degree in organizational communications as well as a master's degree in business administration.

**TUESDAY**  
11:00 A.M.–1:30 P.M.  
LIBERTY PARK | \$45

There will be a shuttle to and from the run from the Salt Palace Convention Center. Please arrive 15 minutes prior to departure time.

**Tuesday Night Social**

**Keys on Main**  
**7:00–11:00 p.m.**

\$80 Member/  
Nonmember

\$65 Students

Join us for drinks, dancing and dueling pianos! Get ready to sing along to your favorite songs and have plenty of laughs.

Light appetizers and two drink tickets are included.

Transportation will not be provided but the venue is walking distance of the convention center.

# Tuesday Morning Platform Presentations

	8:00-8:15	8:20-8:35	8:40-8:55	9:00-9:15
250 AB	<b>Chemicals of Emerging Concern in the Environment: Organic Flame Retardants</b>   Da Chen, Robert Letcher  190 In-situ accumulation of flame-retardants in muscle tissues of smallmouth bass ( <i>Micropterus dolomieu</i> ) and snail bullhead catfish ( <i>Ameiurus brunneus</i> )   <i>M. La Guardia</i>	191 Long term spatial and temporal trends of PBDEs and their replacements in the Great Lakes atmosphere   <i>L. Liu</i>	192 Alternative Flame Retardants in San Francisco Bay Biota   <i>R. Sutton</i>	193 Gestational vs. Lactational Transfer of Firemaster 550 Components in Perinatally Dosed Rats   <i>A. Phillips</i>
250 DE	<b>Design and Use of Spiked Sediment Toxicity Tests to Improve Environmental Management Decision Making</b>   Steven Bay, Lisa Taylor  197 Spiking metals in freshwater or marine sediments for use in laboratory toxicity testing: Challenges and recommendations   <i>B. Brumbaugh</i>	198 Pyrethroid sediment toxicity data and risk assessment: challenges associated with highly hydrophobic chemicals   <i>J. Giddings</i>	199 Development and application of freshwater sediment-quality benchmarks for currently used pesticides based on spiked-sediment toxicity data   <i>L. Nowell</i>	200 Evaluation of sediment toxicity and risk assessment for benthic organisms: A DDT case study   <i>P. Fuchsman</i>
251 AB	<b>Antibiotics in the Environment: Ecological Effects, Antibiotic Resistance Development and Implications for Human Health</b>   Chairs: ----->  205 Antibiotics emission in the river basins of China and their linkage to bacterial resistance   <i>G. Ying</i>	206 Modeling the emergence of antibiotic resistance in the environment: an analytical solution for the minimum selection concentration   <i>B. Greenfield</i>	207 Occurrence and abundance of antibiotics and resistance genes in drinking water sources in East China   <i>C. Cui</i>	208 Hazards Posed by Antibiotics and Antibiotic Resistance in Coastal Ecosystems   <i>G. Scott</i>
Ballroom AC	<b>Deepwater Horizon Oil Spill – Five Years Later – Part 1</b>   Emily Maung-Douglass, Robert Griffitt  212 Discovery of biotic and abiotic transformation products from the Deepwater Horizon oil spill by ultra-high resolution FT-ICR mass spectrometry   <i>R. Rodgers</i>	213 Evaluating the Endocrine Disrupting Potential of Crude Oil and Dispersant via Transactivation Assay Screening   <i>A. Temkin</i>	214 Investigating the immunosuppressive effects of exposure to Deepwater Horizon oil on northern Gulf of Mexico fish   <i>N. Ortell</i>	215 Analysis of Corexit® 9500 dispersant biodegradation in seawater using high resolution mass spectrometry   <i>S. Choyke</i>
Ballroom B	<b>Integrated Environmental Assessment and Management General – Part 1</b>   Daniel Lavoie, Nile Kemble  220 Sustainability and Precautionary Principle in Source Water Protection For Drinking Water Production   <i>I. Brüning</i>	221 US Environmental Protection Agency Updated Human Health Ambient Water Quality Criteria   <i>C. Flaherty</i>	222 Determination of a Mercury Background/Reference Condition in a Northeastern Freshwater Pond System Using Multiple Lines of Evidence   <i>K. Durocher</i>	223 Quantitative Weight of Evidence for Sediment Recovery in the Portland Harbor Superfund Site   <i>D. Nielsen</i>
Ballroom D	<b>Ecological Consequences of Exposure to Pharmaceuticals – Part 1</b>   Heiko Schoenfuss, Daniel Caldwell, Silke Hickmann, Damia Barcelo, James Lazorchak  228 Ecopharmacovigilance in Practice: Focusing on Risk and not Presence   <i>J. Snape</i>	229 Uptake of pharmaceuticals influences plant development and stress signaling networks   <i>L. Carter</i>	230 The Effect of Sertraline on Behavioural Indices in Virile Crayfish ( <i>Orconectes virilis</i> )   <i>G. Pyle</i>	231 Effects of chronic analgesic exposure on the early life stages of zebrafish ( <i>Danio rerio</i> )   <i>K. Hammill</i>
Ballroom E	<b>Mercury in Western North America: A Synthesis of Spatiotemporal Patterns, Biogeochemistry, Bioaccumulation and Risk</b>   Chairs: ----->  236 Comparison of mercury mass loading in streams to atmospheric deposition in watersheds in the Western US: Evidence for non-atmospheric mercury sources   <i>J. Domagalski</i>	237 Surface-air mercury fluxes across Western North America: A synthesis of spatial trends and controlling variables   <i>C. Eckley</i>	238 Spatial variations in benthic methylmercury production rates among ecosystems and habitats across western North America   <i>M. Marvin-DiPasquale</i>	239 Mercury-Selenium mass concentrations and molar ratios in fish and wildlife across gradients of metal exposure in the Western United States   <i>A. Stewart</i>
Ballroom F	<b>Microplastics</b>   Kay Ho, Robert Burgess  244 Microplastic Abundance in South Carolina Estuaries   <i>A. Gray</i>	245 Microplastics in 29 Tributaries to the Great Lakes   <i>A. Baldwin</i>	246 Pathways for Degradation of Plastic Polymers Floating in the Marine Environment   <i>B. Gewert</i>	247 Microplastic formation from plastic debris in estuarine environments   <i>J. Weinstein</i>
Ballroom G	<b>Scientific Approaches to Support Restoring Great Lakes Areas of Concern and Addressing Beneficial Use Impairments</b>   Chairs: ----->  252 Delisting the Deer Lake Area of Concern – An evaluation of actions and strategies for removing the fish consumption impairment   <i>M. Loomis</i>	253 The complexity of success: A case study of the potential short-term and long-term impacts of remediation at the Upper Trenton Channel AOC   <i>R. Otter</i>	254 Weight-of-evidence approach using chemical and biological metrics to evaluate tributaries to the Niagara River   <i>M. Mills</i>	255 Issues Related to Removal of the Fish Tumor Beneficial Use Impairment at Ashtabula Ohio   <i>M. O'Brien</i>
Ballroom H	<b>Advancements in the Field of Passive Sampling: Unique Applications and Novel Developments – Part 2</b>   Jonathan Challis, David Alvarez  260 Evaluation of various polymers for equilibrium passive sampling of moderately hydrophobic emerging pollutants in water   <i>W. Lao</i>	261 Air-water exchange, spatial and temporal trends of PBDEs along an urban River using passive samplers   <i>R. Lohmann</i>	262 Transforming Epidemiological Studies: Using Passive Wristband Samplers to Measure Environmental Contaminant Exposure   <i>H. Dixon</i>	263 Integrative Passive Sampling for Quantitatively Estimating Pulsed Pesticide Exposures in Aquatic Systems   <i>S. Morrison</i>
Ballroom I	<b>Birds as Indicators of Ecosystem Health: Investigations of Molecular to Population Level Effects of Contaminant Exposure</b>   Jonathan Verreault, Kim Fernie, Jessica Head  267 In Vitro Metabolism of Tetradecabromo-1,4-diphenoxylbenzene Flame Retardant and Photodegraded By-products in a Herring Gull Hepatic Microsomal Assay   <i>R. Letcher</i>	268 Relationships between PBDE concentrations and activity and transcription of type 1 deiodinase in liver of a highly flame retardant-exposed gull   <i>A. François</i>	269 Associations between organohalogen concentration, expression of genes involved in thyroid regulation and thyroid hormones in highly contaminated gulls   <i>R. Técher</i>	270 Embryonic Exposure to Technical Short Chain Chlorinated Paraffins (C10-13, 55.5%) Alters Thyroid-Related Parameters in Hatchling American Kestrels   <i>K. Fernie</i>
Ballroom J	<b>Ecotoxicology of Environmentally Relevant Nanomaterial Exposures</b>   Helen Poynton, Jason Unrine, James Lazorchak  275 The ecotoxicity of surface functionalized silver nanoparticles in microcosms with increasing community complexity   <i>F. Wu</i>	276 Elucidating impact of nanosized TiO <sub>2</sub> and ZnO on microbial ecology   <i>Y. Liang</i>	277 Experiments and models relating effects of silver nanoparticles on individuals to populations of <i>Daphnia</i>   <i>L. Stevenson</i>	278 Investigating toxicity of ZnO nanoparticles to earthworms in soils of different organic matter using oxidative stress and weight loss as endpoints   <i>P. Mwanga</i>
Track	<b>Aquatic Toxicology and Ecology</b>	<b>Integrated Env Assessment and Management</b>	<b>Environmental or Analytical Chemistry</b>	<b>Linking Science and Social Issues</b>

# Tuesday Morning Platform Presentations

10:00-10:15		10:20-10:35		10:40-10:55		11:00-11:15			
<b>Chemicals of Emerging Concern in the Environment: Organic Flame Retardants</b>   Da Chen, Robert Letcher									
194 Inhibition of thyroid hormone sulfo-transferase activity by 2,4,6-tribromophenol and hydroxylated PBDEs in a human choriocarcinoma placental cell line   C. Leonetti		195 Bioaccumulation processes of alternative halogenated flame retardants and PBDEs in the terrestrial and marine environments of the Canadian Arctic   A. Morris		196 Measuring Gaseous Organic Flame Retardants in Great Lakes Air Using Passive Polyethylene Samplers   C. McDonough		Discussion			
<b>Design and Use of Spiked Sediment Toxicity Tests to Improve Environmental Management Decision Making</b>   Steven Bay, Lisa Taylor									
201 Bioavailability-based sediment risk assessment approach for nickel   C. Schlekat		202 Validation of a new standardized test method for the freshwater amphipod <i>Hyalella azteca</i> : determining the chronic effects of silver in sediment   L. Taylor		203 The Use of Mesocosms to Assess Contaminant Effects on Benthic Communities   M. Fulton		204 The effects of kaolin clay on the amphipod <i>Eohaustorius estuaricus</i>   B. Phillips		250 AB	
<---- Title   James Lazorchak, Jason Snape, Oana Enick, Raanan Bloom, Guang-Guo Ying									
209 Fate and distribution of ARGs under the selective pressure of sub-lethal level of heavy metals on the river catchment scale   Y. Luo		210 Expression patterns of sul genes in typical sulfonamide-resistant bacteria from manured soils in Jiangsu Province, China   N. Wang		211 Antimicrobial susceptibility and mitigation upon triclosan exposure in wastewater-associated stream periphyton communities   K. Trowbridge		Discussion		251 AB	
<b>Deepwater Horizon Oil Spill – Five Years Later – Part 1</b>   Emily Maung-Douglass, Robert Griffitt									
216 Characterization of oil and water-accommodated fractions used to conduct toxicity testing for the Deepwater Horizon Natural Resource Damage Assessment   H. Forth	●	217 Combined effects of Deepwater Horizon crude oil exposure, temperature and developmental stage on oxygen consumption of embryonic and larval mahi-mahi   C. Pasparakis	●	218 Characterization of the various sediment exposure techniques used during toxicity testing in support of the Deepwater Horizon NRDA   M. Krasnec	●	219 Effects of Deepwater Horizon Oil on the Migration and Survival of Marsh Periwinkle Snails ( <i>Littoraria irrorata</i> )   R. Garner	●		250 DE
<b>Integrated Environmental Assessment and Management General – Part 1</b>   Daniel Lavoie, Nile Kemble									
224 Characterization of Wetland Contaminant Transport Processes through Innovative Field and Modeling Techniques   C. Jones	●	225 Development of the Chemical Aquatic Fate and Effects Database and its Usefulness in Assisting Chemical Spill in Aquatic Environments   A. Bejarano	●	226 Modifications of the AQUATOX Ecosystem Model for Improved Application in the Nearshore Marine Environment   E. Blancher	●	227 ECOTOX Knowledgebase: Search Features and Customized Reports   B. Kinziger	●		251 AC
<b>Ecological Consequences of Exposure to Pharmaceuticals – Part 1</b>   Heiko Schoenfuss, Daniel Caldwell, Silke Hickmann, Damia Barcelo, James Lazorchak									
Discussion		233 Bioaccumulation of pharmaceuticals by <i>Corbicula fluminea</i> during an effluent-dependent experimental stream mesocosm study of TiO2 nanoparticles   S. Burkett	●	234 Biomonitoring of Contaminants of Emerging Concern using Wild Eastern Oysters ( <i>Crassostrea virginica</i> ) in Georgia, USA Estuaries   D. Brew	●	235 Human pharmaceuticals with aquatic effects at or below the 1 µg/L NEPA categorical exclusion concentration for conducting environmental assessments   J. Laurenson	●		251 AB
<---- Title   Collin Eagles-Smith, Chris Eckley, David Evers, Mark Marvin-DiPasquale									
240 Spatial and temporal trends in fish mercury concentrations across western North America   C. Eagles-Smith	●	241 The influence of reservoir structure and management on mercury concentrations in sportfish across Western North America   J. Willacker	●	242 Spatial and Temporal Variation in Avian Mercury Exposure and Risk Across Western North America: a Synthesis   J. Ackerman	●	243 Spatial and temporal variability in fish mercury concentrations from a large river system   J. Becker	●		251 BC
<b>Microplastics</b>   Kay Ho, Robert Burgess									
248 Occurrence of Microplastics in the Stomach Contents of Sunfish from the Brazos River Basin, Central Texas   C. Peters		249 Aryl Phosphite Antioxidants as Molecular Markers of Plastic Particles in Marine Environments   G. Getzinger		250 Bioavailability of Fluoranthene Adsorbed to Microplastics   S. Au		251 Does microplastic in sludge pose a risk to terrestrial environments?   A. Palmqvist			251 AC
<---- Title   Amy Mucha, Edwin Smith, Marc Mills, David Walters									
256 Assessing Historical and Emergent Sediment Contamination in Three Lake Ontario Areas of Concern   K. Stevack		257 Use of macroinvertebrate biotic condition and tissue contaminant levels to assess and rank tributaries to the Niagara River Area of Concern   J. Lazorchak		258 Determining the Impacts of Toxins in the Great Lakes Using Biomarkers of Dreissenid Mussels   N. Neureuther		259 Environmental Enhancements to the Milwaukee Harbor Breakwater   B. Suedel			251 DE
<b>Advancements in the Field of Passive Sampling: Unique Applications and Novel Developments – Part 2</b>   Jonathan Challis, David Alvarez									
264 Calibrating a polydimethylsiloxane passive air sampler for measuring indoor SVOCs   M. Diamond		265 Multi-Analyte Passive Samplers with Tissue Mimicry to Measure the Bioavailability of Contaminants   P. Edmiston		266 Calibration of a novel passive sampler for the measurement of 34 polar organic contaminants in aquatic systems   J. Challis		Discussion			251 EF
<b>Birds as Indicators of Ecosystem Health: Investigations of Molecular to Population Level Effects of Contaminant Exposure</b>   Jonathan Verreault, Kim Fernie, Jessica Head									
271 Characterizing contaminant exposure along the Central Flyway and its effects on avian pre-migratory fuelling ability using two shorebird species   K. Bianchini		272 Assessment of Population, Reproductive, and Health Impairments in Great Lakes Colonial Waterbirds Breeding in Contaminated Sites in Michigan   K. Grasman		273 Decadal re-evaluation of contaminant exposure and reproductive success of ospreys ( <i>Pandion haliaetus</i> ) nesting in Chesapeake Bay Regions of Concern   B. Rattner		274 Validating and Applying Amino Acid-Specific Stable Nitrogen Isotope Analysis to the Interpretation of Avian Contaminant Monitoring Data   C. Hebert			251 GH
<b>Ecotoxicology of Environmentally Relevant Nanomaterial Exposures</b>   Helen Poynton, Jason Unrine, James Lazorchak									
279 Modeling the effect of cysteine and humic substances on bioavailability of Ag from Ag nanoparticles to a freshwater snail   S. Luoma		280 Adsorption and Uptake of Tri-Layered Silver Nanoparticles (107Ag@Au@109Ag) by the green alga <i>Chlamydomonas reinhardtii</i>   D. Panton		281 Influence of PAH physico-chemical characteristics on their bioavailability once adsorbed to carbon nanotubes   E. Linard		282 The interactive effects of UV radiation and titanium dioxide nanoparticles on marine snow-associated microbes   V. Haynes			251 HI
<b>Regulatory Directions</b>		<b>Remediation/Restoration</b>		<b>Special Symposia</b>		<b>Terrestrial or Wildlife Toxicology and Ecology</b>			
Track	Ballroom J	Ballroom I	Ballroom H	Ballroom G	Ballroom F	Ballroom E	Ballroom D	Ballroom C	Ballroom B

# Tuesday Afternoon Platform Presentations

	1:00-1:15	1:20-1:35	1:40-1:55	2:00-2:15
250 AB	<b>"One Health": Opportunities for SETAC Leadership in Integrating Environmental Human and Animal Health</b>   Thomas Augspurger, Nil Basu  <b>283</b> One Health System-Wide Science and Care: Opportunities to Help Counteract the Sixth Extinction While Improving Human Health and Economic Vitality   <i>V. Beasley</i>	<b>284</b> Inter-connections between human health and ecological integrity: An organizational framework for research and development   <i>W. Benson</i>	<b>285</b> Exploring Collaboration and Business Opportunities in One Health   <i>J. Whaley</i>	<b>286</b> Integrating the One Health" approach in the design of sustainable munition compounds."   <i>M. Johnson</i>
250 DE	<b>Building a Weight of Evidence for Bioaccumulation Assessment</b>   Michelle Embry, Jon Arnot  <b>291</b> A Bioaccumulation Assessment of Triclosan using a Weight of Evidence Approach   <i>S. Pawlowski</i>	<b>292</b> A global model for a global issue: understanding key factors driving the trophic magnification of chemicals   <i>D. Walters</i>	<b>293</b> Applying a weight-of-evidence approach to the use of field-derived BAFs and BSAFs in the bioaccumulation assessment of pesticides in Canada   <i>C. Quinn</i>	<b>295</b> Pragmatic Pharmaceutical Prioritization: using accumulation and elimination as key steps in prioritizing drugs for environmental risk   <i>S. Owen</i>
251 AB	<b>Modeling and Interpreting Effects of Metals Mixtures</b>   Eric Van Genderen, Kevin Brix  <b>299</b> Chronic effects of cadmium and nickel mixtures to <i>Daphnia magna</i>   <i>E. Perez</i>	<b>300</b> Toxicity of metal mixtures in a mining-impacted stream to <i>Daphnia magna</i> : Comparison of results in simulated and field-collected waters   <i>K. Ebeling</i>	<b>301</b> Interactive effects of waterborne metals (Cd, Cu, Ni and Zn), singly and in binary mixtures, on fathead minnow ( <i>Pimephales promelas</i> ) reproduction   <i>M. Driessnack</i>	<b>302</b> On Water Hardness, Alkalinity, and the Differing Effects of a 4-Way Mixture of Cd, Se, SO <sub>4</sub> , and NO <sub>3</sub> on Invertebrates   <i>S. Bogart</i>
Ballroom AC	<b>Deepwater Horizon Oil Spill – Five Years Later – Part 2</b>   Emily Maung-Douglass, Robert Griffitt			
Ballroom B	<b>306</b> Role of crude oil ingestion by zooplankton in the fate of crude oil spills in the sea   <i>R. Almeda</i>	<b>307</b> Impacts of the 2010 Deep Water Horizon oil spill on coastal and pelagic fish from the Gulf of Mexico   <i>M. Grosell</i>	<b>308</b> Toxicity of very thin surface slicks of Deepwater Horizon oil to Gulf of Mexico fish and invertebrate embryos and larvae   <i>J. Morris</i>	<b>309</b> The use of Eicosanomics to investigate adverse outcomes of DOSS exposure in the Chorioallantoic membrane   <i>T. Cantu</i>
Ballroom C	<b>Assessing Contaminant Effects in Multi-stress Ecosystems</b>   David Ostrach, Cameron Irvine			
Ballroom D	<b>314</b> Bioavailability of organochlorine chemicals and molecular changes in fathead minnows from single and complex mixture exposures   <i>V. Dang</i>	<b>315</b> Effects of insecticides on stream invertebrates in soy production regions in South America   <i>L. Hunt</i>	<b>316</b> Coho Salmon Spawner Mortality in Pacific Northwest Urban Watersheds: Lethal Stormwater Impacts are Prevented by Soil Bioinfiltration   <i>J. Sromberg</i>	<b>317</b> From single-species to aquatic communities – How can we get the most for mixture toxicity assessments?   <i>S. Hasenbein</i>
Ballroom E	<b>Ecological Consequences of Exposure to Pharmaceuticals – Part 2</b>   Heiko Schoenfuss, Daniel Caldwell, Silke Hickmann, Damia Barcelo, James Lazorchak			
Ballroom F	<b>322</b> Evaluation of Prioritization Methods in Relation to Adverse Impacts of Pharmaceuticals on Fish Reproduction   <i>M. Overturf</i>	<b>323</b> Beyond emerging contaminants: bioactive transformation products and their implications for ecosystem health   <i>D. Cwiertny</i>	<b>324</b> Impacts of wastewater contaminant metformin on the reproductive system of fathead minnows ( <i>Pimephales promelas</i> )   <i>N. Niemuth</i>	<b>325</b> Laboratory approaches to understanding gonadal development and abnormalities in wild-caught smallmouth bass ( <i>Micropterus dolomieu</i> )   <i>S. Kadlec</i>
Ballroom G	<b>Direct and Indirect Effects of Current-Use Pesticides on Wildlife</b>   Christy Morrissey, Kathryn Kuivila			
Ballroom H	<b>330</b> Evaluation of the relative risk to birds of alternative pesticides using USEPA's TIM/MCnest Model   <i>M. Etterson</i>	<b>331</b> Pyrethroid exposure affects avian immunity to West Nile virus   <i>M. Jankowski</i>	<b>332</b> Conspecific aggression, testosterone, & ornamentation of female bluebirds at a golf course: a case for disturbance induced disjointed signaling?   <i>L. Gillespie</i>	<b>333</b> Scaling pesticide impacts on Streaked Horned Larks ( <i>Eremophila alpestris strigata</i> ) from fields and flocks to landscapes and populations   <i>D. Dishman</i>
Ballroom I	<b>Mercury Fate and Biogeochemistry</b>   Nelson O'Driscoll, Sara Klapstein, Joao Canario			
Ballroom J	<b>338</b> Periphyton Communities Methylate Mercury in an Industrially Contaminated Creek   <i>T. Olsen</i>	<b>339</b> Quantifying methylmercury photodemethylation rates in freshwater temperate lakes   <i>S. Klapstein</i>	<b>340</b> Use of Hg Stable Isotopes to Track Environmental Methylmercury Sources of Estuarine Fish   <i>M. Li</i>	<b>341</b> Using cysteine to quantify the biomagnification of methylmercury in aquatic food webs: A novel approach   <i>J. Thera</i>
Ballroom K	<b>Aquatic and Terrestrial Plants in Ecotoxicology and Risk Assessment</b>   Henry Krueger, Mark Hanson			
Ballroom L	<b>346</b> Methodology for the derivation of aquatic plant water quality criteria   <i>D. Eigner</i>	<b>347</b> Ecosystem services approach to pesticide risk assessment and management of non-target terrestrial plants: recommendations from SETAC Europe workshops   <i>G. Arts</i>	<b>348</b> Risks posed to seagrass and mangrove communities from PSII herbicides: A case study from temperate Australia   <i>V. Pettigrove</i>	<b>349</b> Species Sensitivity Distributions for Non-Target Plant Studies   <i>J. Green</i>
Ballroom M	<b>Environmental or Analytical Chemistry General – Part 2 Methods</b>   John Kucklick			
Ballroom N	<b>354</b> MIPs-DESI-MS/MS: A new way to monitor nitrosamines in water?   <i>S. Egli</i>	<b>355</b> Development of a Handheld Sensor System for the Detection of Heavy Metals in Water   <i>C. Sullivan</i>	<b>356</b> Characterization Techniques for Nanomaterials – Recent Analytical Developments   <i>C. Stephan</i>	<b>357</b> Development of LC-MS Techniques to Analyze Reproductive and Stress Steroid Hormones in Gray Whale ( <i>Eschrichtius robustus</i> ) Blubber   <i>M. Gendron</i>
Ballroom O	<b>Use of Molecular, Computational and Systems Biology Approaches to Advance Next Generation Ecological Risk Assessment</b>   Chairs: ----->			
Ballroom P	<b>361</b> Enhancing high throughput toxicology – development of putative adverse outcome pathways linking ToxCast screening targets to relevant apical hazards   <i>K. Fay</i>	<b>362</b> Predicting biological effects of environmental mixtures using exposure:activity ratios (EAR) derived from USEPA's ToxCast data   <i>B. Blackwell</i>	<b>363</b> Evaluation of Toxicity Equivalent Calculations for Use with Data from In Vitro Aromatase Inhibition Assays   <i>K. Watanabe</i>	<b>364</b> Exploring the use of orthogonal high-throughput assay data for rapid human and ecological risk screening   <i>E. Yost</i>
Ballroom Q	<b>Assessing the Environmental Fate and Exposure of Engineered Nanoparticles Under Relevant Conditions</b>   Jerome Labille, Patrick Ollivier			
Ballroom R	<b>370</b> Fast, accurate, and multivariate nanoparticle fate and effects modeling using moment methods   <i>A. Dale</i>	<b>371</b> Fate, transport and effects of nanoparticles of relevance to agriculture   <i>J. Unrine</i>	<b>372</b> Improving exposure assessment with bench scale testing for removal of nanoparticles during wastewater treatment   <i>D. Tobias</i>	<b>373</b> Monitoring of cerium dioxide and titanium dioxide nanoparticles by spICPMs and FEG-SEM imaging in Loire River water, France   <i>K. Phalayong</i>
Track	<b>Aquatic Toxicology and Ecology</b>	<b>Integrated Env Assessment and Management</b>	<b>Environmental or Analytical Chemistry</b>	<b>Linking Science and Social Issues</b>

# Tuesday Afternoon Platform Presentations

3:00-3:15		3:20-3:35		3:40-3:55		4:00-4:15			
<b>"One Health": Opportunities for SETAC Leadership in Integrating Environmental Human and Animal Health</b>   Thomas Augspurger, Nil Basu									
287 Expanding environmental toxicology in One Health by studying the role of contaminants in complex health problems; case studies in Haiti and Kenya   <i>T. Sabo-Attwood</i>		288 Comparative Pharmacology and Toxicology: An Integrative Bridge for the One Health Initiative?   <i>B. Brooks</i>		289 Applying a Holistic Approach to Chemical Management to Improve Community Well-being   <i>L. Kapustka</i>		290 Research on coal-tar-based sealcoat exemplifies the One Health concept   <i>B. Mahler</i>			
<b>Building a Weight of Evidence for Bioaccumulation Assessment</b>   Michelle Embry, Jon Arnot									
296 Preliminary results of the metabolic activity in alligator gar ( <i>Atractosteus spatula</i> ): A comparison with rainbow trout ( <i>Oncorhynchus mykiss</i> )   <i>K. Johanning</i>		297 Weight of evidence assessment of the PBT properties of cyclic volatile siloxanes (cVMS)-1   <i>J. Bridges</i>		298 Why excluding benthic invertebrate biotransformation in P and B assessment may jeopardize ERA of hydrophobic organic contaminants   <i>H. Selck</i>		294 In Vitro to In Vivo Extrapolation of Hepatic Metabolism in Fish: An Inter-laboratory Comparison of In Vitro Methods   <i>K. Fay</i>			
<b>Modeling and Interpreting Effects of Metals Mixtures</b>   Eric Van Genderen, Kevin Brix									
303 Statistical determination of non-additivity in toxicity of metal mixtures to <i>Daphnia magna</i>   <i>E. Traudt</i>		304 Chronic waterborne toxicity of binary mixtures of Ag, Cd, Cu, Ni, Pb and Zn to the freshwater snail <i>Lymnaea stagnalis</i>   <i>A. Cremazy</i>		305 Mesocosm experiments evaluate metal mixture toxicity on aquatic insects   <i>T. Schmidt</i>		Discussion			
<b>Deepwater Horizon Oil Spill – Five Years Later – Part 2</b>   Emily Maung-Douglass, Robert Griffitt									
310 Photo-enhanced Toxicity of Deepwater Horizon Spill Oil to Larval Red Drum and Speckled Seatrout   <i>M. Alloy</i>		311 Effects of Deepwater Horizon oil and dispersants on various life stages of oysters   <i>A. Volety</i>		312 Photo-enhanced Toxicity of Fresh and Weathered Macondo Crude Oils to Marine Organisms Exposed to Natural and Artificial Sunlight   <i>B. Finch</i>		313 Toxic effects of Deepwater Horizon oil on early life-stage red drum and speckled seatrout   <i>R. Takeshita</i>			
<b>Assessing Contaminant Effects in Multi-stress Ecosystems</b>   David Ostrach, Cameron Irvine									
318 Developing New Diagnostic Tools for Stream Causal Assessment   <i>K. Schiff</i>		319 Evaluating relations between stressors and ecological endpoints in streams at the regional scale   <i>P. Van Metre</i>		320 One, two, too many; multiple stressors and the adaptive assessment, remediation and management of contaminated landscapes   <i>W. Landis</i>		321 Climate Change and Ecological Risk Assessment for Contaminated Sites   <i>L. Gaastrand-Tatro</i>			
<b>Ecological Consequences of Exposure to Pharmaceuticals – Part 2</b>   Heiko Schoenfuss, Daniel Caldwell, Silke Hickmann, Damia Barcelo, James Lazorchak									
326 Evaluation of conventional and alternative treatment of hospital and urban wastewater in the removal of antibiotics and antibiotic resistance genes   <i>D. Barcelo</i>		327 Use of bioactivity tools to measure estrogenic mixtures below WWTPs with differing treatment technologies   <i>K. Ketelle</i>		328 Development of the Coastal Biosensors for Endocrine Disruption (C-BED) Assay Reveals Implications for Human and Ecological Health   <i>H. Poynton</i>		329 Protein expression profiles in early-life stages zebrafish ( <i>Danio rerio</i> ) exposed to triclosan   <i>E. Falisse</i>			
<b>Direct and Indirect Effects of Current-Use Pesticides on Wildlife</b>   Christy Morrissey, Kathryn Kuivila									
334 Assessing the Impact of Neonicotinoid Insecticides on Northern Bobwhite Quail ( <i>Colinus virginianus</i> ) in Texas   <i>H. Ertl</i>		335 Neonicotinoid Pesticide use and potential exposure to Northern Bobwhite and Scaled Quail throughout the Rolling Plains of Texas and Oklahoma   <i>U. Turaga</i>		336 Prevalence of pesticide active ingredients in food boluses of insectivorous Tree swallows in Quebec and Saskatchewan, Canada   <i>C. Morrissey</i>		337 Effects Of Agriculture and Pesticide Use On Abundance of Six Aerial Insectivorous Bird Species Over 30 Years in Canada's Prairie Pothole Region   <i>N. Michel</i>			
<b>Mercury Fate and Biogeochemistry</b>   Nelson O'Driscoll, Sara Klapstein, Joao Canario									
342 Mercury biomagnification and contemporary food web dynamics in lakes Superior   <i>M. Omara</i>		343 An overview of mercury biomagnification in predatory fish in lakes around major mercury emitters in western Canada and influencing factors   <i>M. Evans</i>		344 Mercury levels in invading subarctic forage fish versus arctic forage fish in the eastern Canadian Arctic   <i>S. Pedro</i>		345 Modeling mercury sources, aquatic cycling, and bioaccumulation in the Ohio River: implications for regulatory controls   <i>R. Reash</i>			
<b>Aquatic and Terrestrial Plants in Ecotoxicology and Risk Assessment</b>   Henry Krueger, Mark Hanson									
350 Factors affecting seed banks of riparian communities in an agricultural ecosystem: potential for conservation of native plant diversity   <i>R. Dalton</i>		351 Development of a revised water quality standard for sulfate to protect wild rice ( <i>Zizania palustris</i> ) from elevated hydrogen sulfide in sediment   <i>E. Swain</i>		352 Investigating iron and carbon controls on sulfide toxicity in wild rice mesocosms   <i>S. Lafond</i>		353 Strength and Relevance Assessment for Phytoplankton Data as they Pertain to Atrazine: A Critical Review and Data Re-evaluation   <i>L. Baxter</i>			
<b>Environmental or Analytical Chemistry General – Part 2 Methods</b>   John Kucklick									
358 Development of a compact continuous submerged water samplers to monitor micropollutant time-weighted average concentrations   <i>Y. Kameda</i>		359 Comparison of two green extraction methods, MSPD and QuEChERS, on low-polarity POPs in avian adipose tissue   <i>R. Cooper</i>		360 Novel Molecularly Imprinted Polymers (MIPs) Thin-Films as selective sorbents for Trace Concentrations of Thiophene Compounds in Water   <i>H. Hijazi</i>		Discussion			
<b>&lt;---- Title</b>   Kristin Connors, Jill Franzosa, Edward Perkins									
365 Establishing an AOP for the role of the vitamin D receptor in developmental neurotoxicity   <i>S. Kullman</i>		366 Zebrafish Models For Human Acute Organophosphorus Poisoning   <i>N. Vinas</i>		367 Comparative toxicology of the zebrafish and fathead minnow models: Understanding oxidative stress toxicity to design less hazardous chemicals   <i>J. Corrales</i>		368 Link quantitative toxicogenomics endpoints to conventional toxicity endpoints – phenotypic anchoring and cross species extrapolation   <i>N. Gou</i>			
<b>Assessing the Environmental Fate and Exposure of Engineered Nanoparticles Under Relevant Conditions</b>   Jerome Labille, Patrick Ollivier									
374 Nanoparticle characterization in surface waters by multi-element single particle ICP-MS   <i>A. Barber</i>		375 R-packages and graphical user interface tools for probabilistic exposure, effect, and risk assessments   <i>F. Gottschalk</i>		376 Using network analysis to identify research tendencies and knowledge gaps in experiments with natural organic matter and engineered nanoparticles   <i>N. Sani-Kast</i>		369 Determination of titanium dioxide nanoparticle heteroaggregation with suspended particulate matter in riverine surface waters   <i>D. Slomberg</i>			
<b>Regulatory Directions</b>		<b>Remediation/Restoration</b>		<b>Special Symposia</b>		<b>Terrestrial or Wildlife Toxicology and Ecology</b>			
Track		Ballroom J		Ballroom I		Ballroom H		Ballroom G	
Presentation will not be recorded.								SETAC North America 36 <sup>th</sup> Annual Meeting   39	

# Tuesday Poster Presentations

## Schedule

Setup 7:00 a.m.–8:00 a.m.

Take Down 6:30 p.m.–6:45 p.m.

Presenters are expected to attend their poster during all break periods and evening poster social to discuss their work with scientists visiting their poster.

**Coffee Breaks** 9:15 a.m.–10:00 a.m. and 2:15 p.m.–3:00 p.m.

**Lunch Break** 11:15 a.m.–1:00 p.m.

**Poster Social** 5:00 p.m.–6:30 p.m.

### Birds as Indicators of Ecosystem Health: Investigations of Molecular to Population Level Effects of Contaminant Exposure | Jonathan Verreault, Kim Fernie, Jessica Head

**TP001** Understanding Organophosphate Flame Retardant In Vitro Metabolism in Herring Gulls (*Larus argentatus*) using Michaelis-Menton Enzyme Kinetic Parameters | *A. Greaves*

**TP002** Assessment of metabolism and effects of *in ovo* exposure to a brominated flame retardant, TBBPA-BDBPE, in zebra finches | *M. Eng*

**TP003** Investigating the Variability of Avian Exposure to Selenium Concentrations Found in Aquatic Ecosystems | *A. Jarvis*

**TP004** Monitoring Avian Blood Lead Levels to Determine the Effectiveness of Remedy on the Anaconda Smelter Superfund Site | *K. Nelson*

**TP005** A case study of trophic level effects on environmental contaminants monitoring: Lesser Flamingo and African Fish Eagle in South Africa | *L. Fuentes*

**TP006** Bioaccumulation of Polychlorinated Biphenyls in Riparian Migratory and Resident Birds of Southeastern Mexico | *J. Herrera-Herrera*

### Ecological Consequences of Exposure to Pharmaceuticals

Heiko Schoenfuss, Daniel Caldwell, Silke Hickmann, Damia Barcelo, James Lazorchak

**TP007** Oxidative stress induced in *Hyalella azteca* by effluent from an NSAID-manufacturing plant in México | *K. Novoa-Luna*

**TP008** Multiple exposure of the pharmaceutical using the *Daphnia* reproduction test | *N. Tatarazako*

**TP009** Effect of three neuroactive compounds exposure on brain of common carp (*Cyprinus carpio*) using oxidative stress biomarkers | *E. Gasca*

**TP010** Characterization of early gonadal development in smallmouth bass (*Micropterus dolomieu*) and effects of ethinyl estradiol on gonadal differentiation | *S. Kadlec*

**TP011** Spatial Trends of Pharmaceuticals in an Urbanized Estuary: Influence of Wastewater Effluents in Narragansett Bay, RI, USA | *D. Katz*

**TP012** Temporal trends of select pharmaceutical compounds entering an estuary from a small, urban river | *M. Cantwell*

### Harmful Algal Bloom Toxins in Inland Waters: Environmental Contaminants of Emerging Concern | Bryan Brooks, Dawn Perkins, Christopher Nietz, Joel Allen, James Lazorchak, Stephanie Smith

**TP013** Health-Based Cyanotoxin Guideline Values Allow for Cyanotoxin-Based Monitoring and Efficient Public Health Response to Cyanobacterial Blooms | *D. Farrer*

**TP014** A watershed cooperative addresses short and long term perspectives for the management of harmful algae at a Southwestern Ohio drinking water reservoir | *C. Nietz*

**TP015** Immunomodulatory potency of toxins produced by harmful algal blooms | *O. Adamovsky*

**TP016** Total, Cellular, and Aqueous Microcystin-LR Following Laboratory Exposures of *Microcystis aeruginosa* to CuSO<sub>4</sub> and a Chelated Copper Compound | *K. Iwinski*

### Mercury Fate and Biogeochemistry

Nelson O'Driscoll, Sara Klapstein, Joao Canario

**TP017** The distribution of methylmercury in sediment, porewater, surface water, and Odonata Larva in the St. Louis River Estuary | *N. Johnson*

**TP018** Microbial production of methylmercury in North Carolina Piedmont stream sediments | *P. Blum*

**TP019** Methylmercury Transport Across the North Channel of the Tagus Estuary (Portugal) | *R. Cesário*

**TP020** Assessing changes in dissolved organic matter quality and its effects on mercury bioaccumulation across a freshwater watershed | *G. Lescord*

**TP021** Genotoxic endpoints following mercury exposure examined in *Caenorhabditis elegans* | *L. Wyatt*

**TP022** A comparison of the toxicokinetics and bioaccumulation potential of mercury and polychlorinated biphenyls in goldfish (*Carassius auratus*) | *J. Li*

**TP023** Relating foodstuffs and human hair to access mercurial exposure level in Poboya, Central Sulawesi, Indonesia | *M. Sari*

**TP024** Maternal Methylmercury Exposure Through Rice Ingestion in Rural China | *C. Hong*

**TP025** Monitoring of methylmercury and DOM over 3 years: Implications for mercury contamination in Kejimkujik National Park | *S. Klapstein*

**TP026** The role of sulfur biogeochemistry in methylmercury formation in salt-marshes (Portugal) | *R. Cesário*

**TP027** Spatial and temporal fluidity of invertebrate communities at a mercury-contaminated site and possible implications for fish mercury bioaccumulation | *M. Poteat*

**TP028** Evaluating mercury bioaccumulation rates in fish using mark-recapture techniques | *T. Mathews*

**TP029** Variability in percent methyl mercury (%MeHg) in fish; assessing the effect of fish ontogeny, diet, and tissue type on the ratio of THg to MeHg | *G. Lescord*

**TP030** The impacts of water chlorination, dechlorination and other chemical use practices on mercury mobility at a mercury spill site | *D. Watson*

**TP031** Mercury loading from floodplain soils in a southern Appalachian watershed | *J. Dickson*

**TP032** Influence of reservoir water level fluctuations on sediment methylmercury concentrations downstream of the historical Black Butte mercury mine, OR | *J. Goulet*

**TP033** Profiles of gut microbiota and methylmercury biomarkers among trimester 3 pregnant mothers | *S. Rothenberg*

**TP034** A comparison of mercury biomagnification through lake food webs supporting brook trout and other fishes | *G. Lescord*

### Assessing Contaminant Effects in Multi-stress Ecosystems

David Ostrach, Cameron Irvine

**TP035** Using the American Bullfrog (*Rana catesbeiana*) as a Model to Evaluate for Long Term Effects of Waste Water Effluent on Growth and Development | *T. Sutton*

**TP036** Genotoxic Damage From Detergent Exposure | *P. Abara*

**TP037** Risk assessment of multiple stressors on macroinvertebrate communities in Mediterranean rivers | *M. Kuzmanovic*

### Spatial and Temporal Trends of Classical and Emerging Pollutants in the Environment and Biota | Bommanna Loganathan, Kenneth Sajwan

**TP038** A Consequence of Train-Based Transportation: Exposure and Effects of Rail Traffic on Lichens During a Five-Month Exposure | *J. Meyer*

**TP039** Bisphenol A contamination levels in selected wastewater and river water samples from Kentucky and Georgia, USA | *K. Sajwan*

**TP040** Per- and Poly-Fluoroalkyl Substances and Temporal Trends and in Relation to Diet in Polar Bears From Canadian Arctic Subpopulations in Hudson Bay | *R. Letcher*

**TP041** Spatial and temporal trends of flame retardants in ringed seals from the Canadian Arctic | *M. Houde*

### Aquatic and Terrestrial Plants in Ecotoxicology and Risk Assessment

Henry Krueger, Mark Hanson

**TP042** Chlorophyll fluorescence spectra of beans grown under various light intensities | *O. Kalmatskaya*

**TP043** Evaluation of laboratory and mesocosm algal studies: How do no observable effect concentrations compare? | *B. Glenn*

**TP044** Evaluation of Sulfide Toxicity to Wild Rice Using a Laboratory-based Hydroponics Study Design | *S. Hall*

**TP045** Review of Multispecies and Field Testing in Assessing Risk of Chemicals to Non-Target Plants in Agricultural Landscapes | *H. Krueger*

**TP046** Seagrass biomarkers baseline in the Petenes Biosphere Reserve | *P. Ramirez Romero*

**TP047** Statistical Assessment of Chemical Mixtures | *C. Teel*

**TP048** The Impact of Variability in Non-Target Terrestrial Plant Studies on Endpoint Selection | *J. Staveley*

**TP049** Three methods to assess the dose-response relationship between sulfide and wild rice (*Zizania palustris*): hydroponic, outdoor mesocosm, and field data | *E. Swain*

**TP050** Combined effect of atrazine and UV-B radiations on photosynthetic activity of phytoplankton | *P. Juneau*

### Deepwater Horizon Oil Spill – Five Years Later

Emily Maung-Douglass, Robert Griffitt

**TP051** Identification and Characterization of Putative Obesogens in Crude Oil and Dispersants used in the Deepwater Horizon Oil Spill | *D. Spyropoulos*

**TP052** Characterization of the dissolved fraction of PAH in mixtures of water and oil used during toxicity testing as part of the Deepwater Horizon NRDA | *C. Lay*

**TP053** Status and results of the Trustee toxicity testing program conducted in support of the Deepwater Horizon Natural Resource Damage Assessment | *J. Morris*

**TP054** Impacts of oil exposure during early life development stages in Sheepshead minnow (*Cyprinodon variegatus*) under different environmental factors | *D. Simning*

**TP055** Toxicity responses of killifish (*Fundulus heteroclitus*) embryos exposed to saturate, aromatic, and polar fractions of Louisiana sweet crude oil | *R. Struch*

Track	Aquatic Toxicology and Ecology	Integrated Env Assessment and Management	Environmental or Analytical Chemistry	Linking Science and Social Issues
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# Tuesday Poster Presentations

**TP056** Sorption of dioctyl sodium sulfosuccinate to Coastal Gulf of Mexico Sediment | *B. Adewale*  
**TP057** Interactive Effects of Mixtures of Phototoxic PAHs | *B. Finch*  
**TP058** Effects of Oil Spill Dispersants on Larval Development of Grass Shrimp, *Palaeomonetes pugio* | *P. Key*  
**TP059** Effects of sediment amended with Deepwater Horizon incident slick oil on the infaunal amphipod *Leptocheirus plumulosus* | *G. Lotufo*  
**TP060** Acute Exposure to a Chemically Dispersed Sweet Crude Oil Causes Neurosensory Lesions in *Brevoortia patronus* and Gill Lesions in *Trachinotus carolinus* | *D. Millemann*  
**TP061** In Vitro Exposure of Dolphin Lymphocytes to Louisiana Sweet Crude Oil and COREXIT | *N. Henry*  
**TP062** Crude oil and dispersant mixture induced reproductive and developmental defects in *Caenorhabditis elegans* | *Y. Zhang*

## Ecotoxicology of Environmentally Relevant Nanomaterial Exposures

Helen Poynton, Jason Unrine, James Lazorchak

**TP063** Species Sensitivity Distributions for Engineered Nanomaterials | *K. Garner*  
**TP064** Assessing the exposure to nanosilver and silver nitrate on fathead minnow gill gene expression and mucus production | *N. Vinas*  
**TP065** Chronic Effects of Silver Nanoparticles on Fingerling Persian Sturgeon (*Acipenser persicus*) | *J. Ali*  
**TP066** Quantifying Hydroxyl Radical Production from the Irradiation of Titanium Dioxide Nanoparticles | *J. Coral*  
**TP067** Sub-lethal effects of oxidative stress from UV-irradiated titanium dioxide | *C. Mansfield*  
**TP068** Presence of grazing organisms can amplify the negative effects of titanium dioxide nanoparticles on stream periphyton communities | *M. Wright*  
**TP069** Comparative assessment of aquatic risks to developing fish associated with organic and nanoparticle based sunscreen formulations | *S. Harper*  
**TP070** Photocatalytic effects of titanium dioxide nanoparticles on oyster hemocytes: in vitro studies under light and dark conditions | *J. Ward*  
**TP071** Effects of natural organic matter on copper oxide nanoparticle dissolution and biouptake kinetics in Gulf killifish (*Fundulus grandis*) embryos | *B. Castellon*  
**TP072** Determination of uptake and trophic transfer of multi-walled carbon nanotubes in freshwater species using microwave induced heating | *A. Parra*  
**TP073** Plastic Particles, a "Trojan Horse" for Pyrene: Studies with Oysters *Crassostrea virginica* | *T. Gaspar*

## Chemicals of Emerging Concern in the Environment: Organic Flame Retardants

Da Chen, Robert Letcher

**TP074** Characterization of polybrominated flame retardants (PBDE's) in waste materials from landfills located in Mexico City Metropolitan Area | *I. Gavilan*  
**TP075** Contamination status of organohalogen compounds and their hydroxylated metabolites in pet cats: effects on thyroid hormones homeostasis | *Y. Yamamoto*  
**TP076** Detection and quantification of 40 non-polybrominated diphenyl ether emerging flame retardants in a secondary WWTP | *M. Woudneh*  
**TP077** Diastereomeric Distribution of Hexabromocyclododecane (HBCD) in Livestock Products and in Livestock Feed | *M. Barghi*  
**TP078** Evaluating low dose Dechlorane plus exposure effects on bioavailability in the soil-mimic conditions | *J. Kim*  
**TP079** Levels of PBDDs and PBDFs in Residential and Firehouse Dust Samples in California and the Potential for Analytical Interference from PBDEs | *F. Brown*  
**TP080** Light microscopic evidence for direct ingestion as the principal BFR uptake pathway for house crickets in contact with BFR-treated furniture foam | *G. Estridge*  
**TP081** Linking Consumer Products to Flame Retardant Levels in Indoor House Dust | *S. Hammel*  
**TP082** Measurement of Organophosphate Flame Retardants in California Residential and Fire House Dust | *R. Gill*  
**TP083** Organophosphate Flame Retardant Hydrolysis and pH-Dependence in Aqueous Solutions: Kinetics and Mechanisms | *R. Letcher*  
**TP084** Spatial Distribution of Halogenated Flame Retardants in Mosses, Lichens, Algae and Soils of South Shetland Islands, Antarctica | *J. Kim*  
**TP085** Temporal comparison of concentrations and the bioaccessibilities of novel brominated flame retardants in dust collected from daycares in SK, Canada | *D. Saunders*

## Use of Molecular, Computational and Systems Biology Approaches to Advance Next Generation Ecological Risk Assessment

Kristin Connors, Jill Franzosa, Edward Perkins

**TP086** Quantitative High-Throughput Screening and Orthogonal Assays to Identify Modulators of the Vitamin D Receptor | *J. Franzosa*  
**TP087** Hypothesis testing with computational modeling: linking aromatase inhibition with plasma vitellogenin dynamics in fathead minnows | *W. Cheng*

**TP088** Comparison of ToxCast in vitro HTS molecular initiating event data to in vivo fish exposures | *J. Crago*

**TP089** High-Throughput Screening Assays to Identify Putative Modulators of Adipogenesis and Lipid Metabolism and Potential Application toward Ecotoxicology | *K. Connors*  
**TP090** *E. coli* live cell array reporter system as a screening tool for the biological effects of oil contaminated sediments | *D. Jung*  
**TP091** Functional Genomics by Transcriptome Analysis of Killifish Ovaries Exposed to Crude Oil | *S. Rana*  
**TP092** Transcriptome analysis of reproductive mechanisms associated with disrupted testes function in killifish exposed to crude oil | *C. Bentivegna*  
**TP093** Environmental monitoring of biofilm community structure with flow cytometry and computer visualization | *A. Zupanic*

## "One Health": Opportunities for SETAC Leadership in Integrating Environmental Human and Animal Health

Thomas Augspurger, Nil Basu

**TP094** "One Health": Opportunities for SETAC Leadership in Integrating Environmental Human and Animal Health | *T. Augspurger*  
**TP095** Fish Tumors and One Health: Public and Environmental Health Benefits from Efforts to Reduce Fish Tumor Prevalence Across North America | *F. Pinkney*  
**TP096** Adverse Health Outcomes of Endocrine Disrupting Chemicals Present in Hydraulic Fracturing Fluids | *V. Balise*  
**TP097** Conservation Medicine, EcoHealth and One Health: Evolving Paradigms Building Transdisciplinary Collaborations, Integrative Research and Local Capacity | *A. Aguirre*  
**TP098** One Health Case Study: Bridging Environmental and Public Health Concerns Post-DWH Oil Spill in Coastal Gulf Communities | *A. Kane*

## Assessing the Environmental Fate and Exposure of Engineered Nanoparticles Under Relevant Conditions

Jerome Labille, Patrick Ollivier

**TP099** Consequence of oxidative stress caused by the metal oxide nanoparticle ZnO in the nematode *Caenorhabditis elegans* | *L. Bush*  
**TP100** Copper Nanoparticle Induced Cytotoxicity to Nitrifying Bacteria used in Wastewater Treatment: A Copper Speciation Study by XAFS | *J. Clar*  
**TP101** Detection of Metal-Based Nanoparticles in Various Environmental Matrices using Single Particle ICP-MS | *C. Stephan*  
**TP102** Determination of nanosilver particles in environmental water | *S. Chen*  
**TP103** Form and toxicity of copper released into aquatic systems from conventionally and nano-sized copper treated lumber | *A. Parks*  
**TP104** NANOHETER – an ERA-NET SIINN Programme (2013-2016), Assessing the fate of manufactured nanoparticles released in surface water | *J. Labille*  
**TP105** Nanoparticles and bacterial biofilm interactions in natural waters: Implication for NPs mobility | *P. Ollivier*  
**TP106** Phytoavailability of Nanoparticles at low concentration using the RHIZOTest Protocol | *C. Layet*  
**TP107** Release of Micronized Copper Particles from Pressure Treated Wood Products | *K. Rogers*  
**TP108** The role of pesticides in stability of TiO<sub>2</sub> nanoparticles in natural waters | *P. Ollivier*

## Mercury in Western North America: A Synthesis of Spatiotemporal Patterns, Biogeochemistry, Bioaccumulation and Risk

Collin Eagles-Smith, Chris Eckley, David Evers, Mark Marvin-DiPasquale

**TP109** Decadal Trends in Fish Mercury Concentrations and Comparison to Health Criteria, Rocky Mountain National Park, USA | *K. Morris*  
**TP110** Mercury in Grand Portage: Tree Swallows as a Bioindicator of Terrestrial and Aquatic Health | *S. Libal*  
**TP111** Mercury in major tributaries of the Athabasca River in the Athabasca oil sands region of Northern Alberta, Canada | *J. Kirk*  
**TP112** Occurrence, transport and mobility of mercury, arsenic and antimony in the Yellow Pine mining district, Idaho, USA | *J. Holloway*

## Building a Weight of Evidence for Bioaccumulation Assessment

Michelle Embry, Jon Arnot

**TP113** In Vitro Fish Hepatic Metabolism: Overview of Ring-Trial to Evaluate Transferability, Intra- and Interlaboratory Reproducibility | *M. Embry*  
**TP114** Regulatory Perspective: Challenges in the Assessment of Aquatic Bioaccumulation of Pesticides | *J. Holmes*  
**TP115** Statistical Approach to Inform the Study Design of an Inter-laboratory Comparison of In Vitro Methods to Estimate Fish Hepatic Metabolism | *M. Embry*  
**TP116** The use of trout liver S9 fraction and cryopreserved hepatocytes in substrate depletion assays for the evaluation of fish xenobiotic biotransformation | *K. Johanning*  
**TP117** The Weight of Evidence (WoE) assessment of the PBT properties of the cyclic volatile siloxanes (cVMSs) - 2 | *K. Solomon*

# Tuesday Poster Presentations

## Today's TIE Toolbox - Applying Toxicity Identification Evaluation Design, Methods and Interpretation for Adaptive Management and Real-World Decision-Making

Marilyn O'Neill, Barry Snyder

**TP118** Use of Zebrafish (*Danio rerio*) for assessing bioconcentration potential of pharmaceuticals | *L. Constantine*

**TP119** Development of whole-sediment toxicity identification evaluation (TIE) techniques for use in Australia | *W. Mehler*

**TP120** It's Toxic, Now What? Key Decision Points for Toxicity Identification Evaluations | *B. DeShields*

**TP121** Toxicity reduction evaluation methods specific to dredged material elutriate evaluations | *A. Kennedy*

**TP122** Developing Toxicity Identification Evaluation Test Strategies: When and How to Make Mid-Evaluation Changes | *W. Goodfellow*

**TP123** Demonstration of a in-situ Toxicity Identification Evaluation (iTIE) System | *J. Daley*

**TP124** Learn from what you know: adaptive use of TIE manipulations | *S. Fong*

**TP125** The Utilization of Toxicity Identification Evaluation Procedures as an Investigative Tool for Wastewater Treatment Design in a Developing Country | *M. Chanov*

**TP126** Effective Techniques for Isolating and Confirming Pathogen-Caused Toxicity | *D. Pillard*

## Winning the Green Ribbon: Application of "Green Chemistry" in the Development of Products and Processes

**TP127** California's Safer Consumer Products Program: Evaluating product-chemical safety using life cycle thinking | *D. Molin*

**TP128** California's Green Chemistry Regulatory Authority and the Safer Consumer Products Program | *D. Molin*

**TP129** GreenScreen: Looking Beyond the Benchmark | *T. Lewandowski*

**TP130** Towards less hazardous industrial chemicals: Comparative behavioral toxicology of two fish models | *B. Steele*

## Integrated Environmental Assessment and Management General - Part 1

Daniel Lavoie, Nilo Kemble

**TP131** Exploring the predictivity of hazard-based chemical alternatives assessment methodologies and incorporation of exposure | *J. Tanir*

**TP132** Critical Review of Lead Ecological Benchmarks in Sediment | *K. Cejas*

**TP133** Evaluation of currently available methods for determining the hydrophobicity of surfactants | *P. Sun*

**TP134** Integration of Natural Complex Substances into the USE-PA's Safer Choice Program Fragrance Criteria | *C. Rudisill*

**TP135** Applying remote sensing to support environmental risk assessment: a case study of a polluted mexican basin | *J. Zamora-Almazan*

**TP136** Implications of Contamination in Rainwater Harvesting: Accumulation of Persistent Organic Pollutants in Irrigated Soil and Garden Vegetables | *S. Hileman*

**TP137** A Comparison of Environmental Assessment Requirements of New Human Drugs in the US and the EU | *T. Lunsman*

**TP138** USEPA's Probability-based Reassessment of Chemical Residues and Fatty Acids in Great Lakes Fish | *L. Stahl*

**TP139** Metals, hidrocarbons and biomarkers in sediments and oysters of five Mexican coastal lagoons | *P. Ramirez Romero*

**TP140** The exposure assessment of new POPs in multimedia and development of monitoring technology for POPs alternatives | *J. Kim*

**TP141** Construction and demolition waste as substrate for plants: Risk assessment and environmental performance | *M. Machado*

**TP142** Progressive Risk Assessment of Polychlorinated Biphenyls through the Total Diet Study in the Korean Population | *J. Kim*

**TP143** Alkylated Polycyclic Aromatic Hydrocarbons in Fish - A Perspective on Crude Oil Train Derailments | *A. Pawlisz*

**TP144** Proxy constituents of chemical mixtures in domestic wastewater for prospective risk assessment | *J. Diamond*

**TP145** Extraction and non-destructive cleanup for mixtures of volatile and semi-volatile chemicals in fish tissue | *K. Löfstrand*

## Remediation/Restoration General

**TP146** An Operational Framework for Controlling Work Flow and Data Hygiene When Preparing Complete and Useable Data Sets for Multiple End Users | *K. Fletcher*

**TP147** Biomonitoring in Chickens Raised on Mercury Contaminated Floodplain Soils | *T. Bingman*

**TP148** Bioremediation of hydrocarbon contaminated soil and water in the vicinity of a telecom service provider plant, using concerted biotechnologies | *I. Onwurah*

**TP149** Bioturbation facilitate degradation of oil components in coastal sediments through activation of microbial community | *N. Deb Adhikary*

**TP150** Development Of An Interagency Guidance To Improve The Reliability Of Data Collected To Support Ecological Restoration Projects | *L. Blume*

**TP152** Engineered plant for phytoremediation of environmental contaminant-the current state of affairs | *R. Anyasi*

**TP153** Influence of pyrolysis temperature on the physicochemical properties and herbicide adsorption of agricultural waste-derived biochar | *Y. Li*

**TP154** Monitoring residues and effects of lead contamination in a wetland: In situ exposures with southern leopard frog (*Lithobates sphenocephalus*) tadpoles | *S. Krest*

**TP155** Monitoring the Natural Attenuation of Chlorobenzenes in Groundwater | *R. Zajac*

**TP156** Relationships between PAHs and Sediment Setting in River Sediments from Detroit, Michigan | *J. Cole*

**TP157** Restoring a reservoir to its historic stream configuration to reduce salinity and selenium exposure in birds at Hailstone National Wildlife Refuge | *D. Rouse*

**TP158** Striking a Balance Between Remedial Goals and Habitat Function: An Exercise in Consensus Building | *K. Hoffman*

**TP159** Variations in Soil TPH Risk Evaluation and Impacts to Remediation Decision-Making | *K. Patel-Coleman*

## Micoplastics

**TP160** Chemical Adsorption of Hydrophobic PAHs in the Marine Environment onto Microplastic Polymers and Subsequent Desorption in a Simulated Fish Gut | *C. Crawford*

**TP161** Sorption of persistent organic pollutants to two bio-based polymers, polylactic acid and polyhydroxylkanoate | *K. Uhlig*

**TP162** Investigations of polychlorinated biphenyl release from engineered solids under shallow and deep ocean conditions | *R. George*

**TP163** Assessing the effects of polyethylene microbeads on juvenile hard clams (*Mercenaria mercenaria*) | *H. Wertz*

**TP164** Ingestion of microplastics by *Daphnia magna* and reproductive effect | *P. Canniff*

**TP165** Presence and toxicity of microplastics in the Canadian aquatic environment: A review | *J. Anderson*

**TP166** Macroplastic trash: the visible pollutants in osprey (*Pandion haliaetus*) nests in Chesapeake and Delaware Bays | *R. Lazarus*

**TP167** Microplastic Contamination in San Francisco Bay | *R. Sutton*

**TP168** Ecological and human health risk from persistent organic pollutants sorbed to microplastics in the marine environment: What does the evidence tell us? | *L. Ziccardi*

**TP169** Understanding the Ecological effects of North Pacific Gyre Plastics using In Vitro Models | *S. Coffin*

## Environmental or Analytical Chemistry General - Part 2

**TP170** A new delivery system of individual PAHs from droplets to study their dissolution rates | *K. Sandoval*

**TP171** A Robust, High Throughput Method for Measurement of Tricosan and Bisphenol Residues in Duplicate Diet Samples | *S. Clifton*

**TP172** Active In Situ Field SPE Extraction Techniques and Advantages for Compliance Monitoring | *B. Hepner*

**TP173** Adsorption Characteristics of Arsenic (V) from Water Using Cattle Bone Char | *S. Begum*

**TP174** Application of a Solid Phase Extraction-LC/MS/MS Method for Determination of Cyanotoxins in Ambient Water During the 2015 Cyanobacteria Bloom Season | *D. Dettenhorst*

**TP175** Changes to the Method Detection Limit Calculation May Pose Regulatory Problems | *N. Love*

**TP176** Comparison of GC-HRMS and GC-MS/MS Methods for the Determination of Persistent Organic Pollutants in Human Serum | *S. Crispo Smith*

**TP177** Degradation Products as Surrogates for Hazard Assessment of Readily Degradable Substances | *T. Lunsman*

**TP178** Developments in high throughput analysis of neonicotinoids pesticides using molecularly imprinted polymers with desorption electrospray ionization-MS | *J. Gauthier*

**TP179** Drying and storage methods affect cyfluthrin concentrations in exposed plant and soil samples | *M. Moore*

**TP180** Honey comb-like nanocomposite based on magnetic macrofungus biomass for selective removal of boron | *A. Oladipo*

**TP181** Method Development and Monitoring of Cylindrospermopsin and Anatoxin-a in Ambient Waters | *J. Shoemaker*

**TP182** Preliminary study about the removal of Methylparaben using ecological filtration, Brazil | *C. Moço Erba Pompei*

**TP183** Rapid analysis of glycols and glycol ethers in aqueous samples by HPLC/MS/MS | *J. Gundersen*

**TP184** Rapid GC-ECD method for quantitative analysis of 63 pesticides optimized for use with silicone wristbands and low density polyethylene | *R. Scott*

**TP185** Simultaneous Analysis of hormones of bowhead whale (*Balaena mysticetus*) utilizing Ultra-Performance Liquid Chromatography tandem mass spectroscopy | *S. Usenko*

Track
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Aquatic Toxicology and Ecology
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Integrated Env Assessment and Management
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Environmental or Analytical Chemistry
---------------------------------------

Linking Science and Social Issues
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## Tuesday Poster Presentations

**TP186** Simultaneous analysis of thirteen endogenous steroid hormones by liquid chromatography mass spectrometry with atmospheric pressure photoionization | *B. Blackwell*

**TP187** The adsorptive properties of peanut and coconut husk powders and their utility in batch and stirred tank flow reactors for the treatment of wastewater | *T. Ozulumba*

**TP188** Validation of Sulfuric acid digestion of Titanium dioxide nanoparticles in multiple Environmental Matrices | *P. Watkins*

### Aquatic Toxicology and Ecology General - Part 2 | Scott Belanger

**TP189** Acute toxicity of heavy metal and locomotor behavior in *Heterocypris incongruens* (Crustacea: Ostracoda) | *Y. Jeong*

**TP190** Acute toxicity of NaCl and Na<sub>2</sub>SO<sub>4</sub> mixtures to juveniles of a freshwater unionid mussel (fatmucket, *Lampsilis siliquoidea*) | *C. Ivey*

**TP191** Application of benchmark dose response models to derive ecotoxicity points of departure for multi-walled carbon nanotubes | *R. Bjorkland*

**TP192** Assessing variability in chemical acute toxicity of unionid mussels: Influence of intra- and inter-laboratory testing, life stage, and species | *S. Raimondo*

**TP193** Assessment of Ecological Risk and Identification of Risk-Reduction Measures in an Urban Stream with Heterogeneous Zinc Contamination in Sediment | *K. Durocher*

**TP194** Ecosystem and limnological influences on mercury in lake food webs across Nova Scotia | *L. Campbell*

**TP195** Ecosystem-Scale Selenium Modeling of Phosphate and Mountaintop Coal Mining Regions of Idaho, West Virginia, and British Columbia | *T. Presser*

**TP196** Effect of age on the variability of cadmium toxicity to *Daphnia magna* neonates | *S. Smith*

**TP197** Effect of Body Length on Metal Concentrations in Mako and Thresher Sharks | *J. Dutton*

**TP198** Effect of Salinity Level on the Hemoglobin Protein of *Chironomus riparius* Larvae for Three Generations | *Z. Alali*

**TP199** Effects of an Industrial Basin Overflow on Trace Element Accumulation in Sediment and Biota of a Coastal Plain Stream | *A. Lindell*

**TP200** Full life-cycle sensitivity of the mayfly *Neocloeon triangulifer* (Ephemeroptera: Baetidae) to copper and zinc | *J. Miller*

**TP201** Heavy Metal-Resistance in Snails Originating from Tar Creek Superfund Site | *A. Simpson*

**TP202** Humic Acid Mitigation in the Assessment of Chemicals under the Toxic Substances Control Act (TSCA) | *T. Wright*

**TP203** Influence of a volcanic eruption on potentially toxic elements in the food web from an ultra-oligotrophic Patagonia lake | *L. Campbell*

**TP204** Land Use Effects on Trace Element Accumulation in Sediment and Biota of Coastal Plain Streams | *D. Fletcher*

**TP205** Legacy Contaminants in Aquatic Biota Associated with Nuclear Weapons Material Production on the Savannah River Site | *A. Bryan*

**TP206** Meta-analysis of aquatic chronic chemical toxicity data | *D. Hoff*

**TP207** Mitochondria-rich cells isolated from gills of the seawater clam *Modiolus modiolus* for use in toxicological studies with copper | *L. Nogueira*

**TP208** Modeling the effects of initial density and copper on competition between *Pseudokirchneriella subcapitata* and *Chlorella vulgaris* | *Y. Kim*

**TP209** New Decision Support Tools for the Assessment of Species Sensitivity Distributions | *S. Belanger*

**TP210** Refinery Effluent Toxicity: Is Arsenic and/or Selenium the Primary Toxicant – an Investigation | *K. Mierau*

**TP211** Toxic Effects of a Complex Metal Mixture on Aquatic Insects Across Multiple Levels of Biological Organization | *S. Duggan*

**TP212** Transgenerational effects of cadmium and tributyltin in the great pond snail, *Lymnaea stagnalis* | *E. Reategui-Zirena*

**TP213** Use of Empirical and Modeled Data to Predict Toxicity Using the USEPA Test of Significant Toxicity | *J. Westfall*

**TP214** Dose dependent modulation of in vitro phagocytic activity, cell proliferation and cytokine production of amphibian immunocytes by heavy metal exposure | *U. Jayawardena*

**TP215** Evaluation of chronic (4- to 12-week) effects of sodium chloride on growth of juvenile mussels (*Lampsilis siliquoidea*) in water-only exposures | *N. Wang*

**TP216** Development of an auto-feeding system for culture and toxicity testing with newly transformed freshwater mussels | *J. Kunz*



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Terrestrial or Wildlife  
Toxicology and Ecology

Track



22<sup>nd</sup> SETAC Europe LCA Case Study Symposium

Montpellier, France

# Save the date!

Welcome to the 22<sup>nd</sup> SETAC Europe LCA Case Study Symposium, to be held from **20-22 September 2016** in Montpellier, France.

The symposium will be co-organised with Irstea and ELSA-PACT Chair.



## Montpellier, the French place to go to!

Less than three hours from Barcelona and Italy, and just 11kilometers from the Mediterranean Sea in the heart of the Languedoc-Roussillon region in the South of France, Montpellier is the ideal holiday destination, a historic, effervescent city with attractions that rank among the most prestigious world heritage sites.

International festivals, dance, music, world-class exhibition at the Fabre Museum... a ton of events in Montpellier.

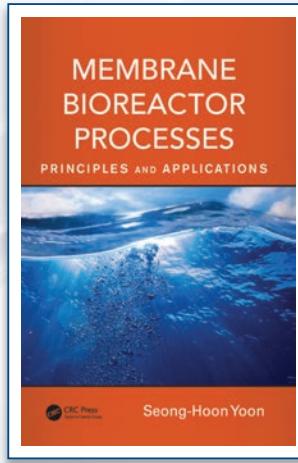
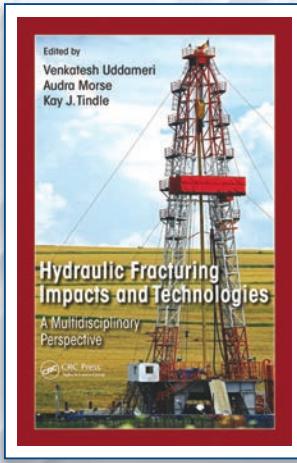
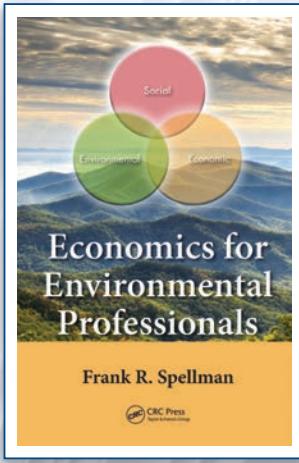
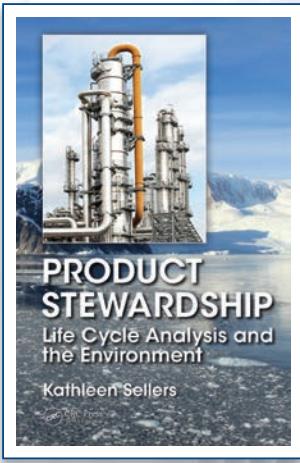
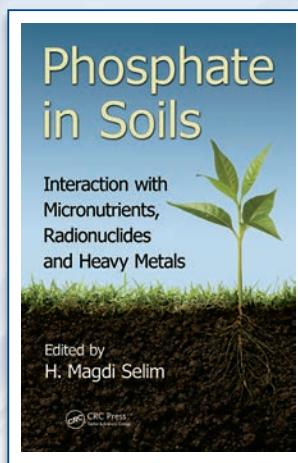
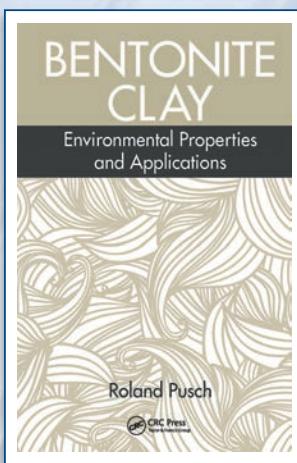
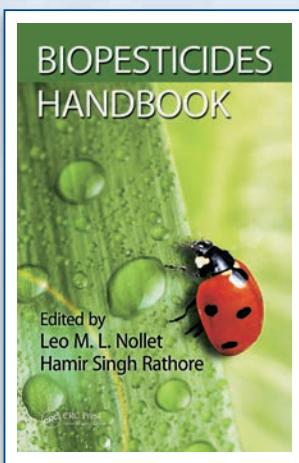
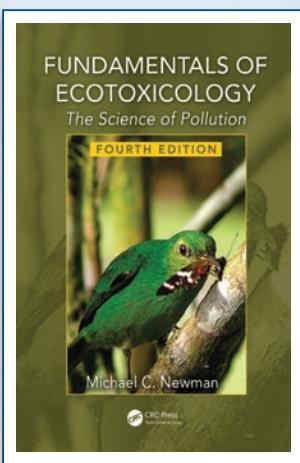
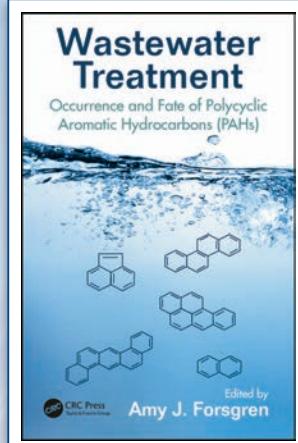
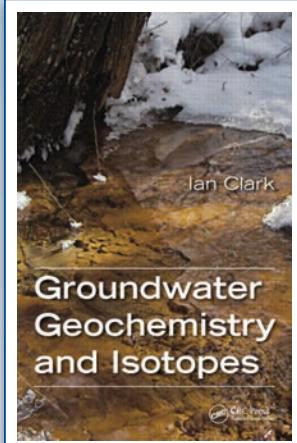
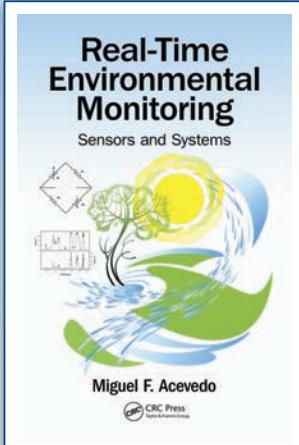
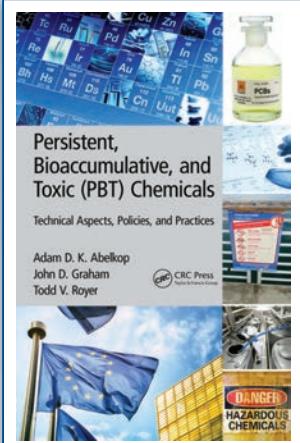
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# Wednesday 4 November

## General Opening Hours

TIME	AREA	LOCATION
7:00 a.m.–6:00 p.m.	Registration	East Registration
8:00 a.m.–6:30 p.m.	Poster Viewing and SETAC Store	Exhibit Hall
9:00 a.m.–6:30 p.m.	Exhibitions	Exhibit Hall

## Daily Schedule

TIME	EVENT	LOCATION
7:00 a.m.–8:00 a.m.	Poster Setup	Exhibit Hall
8:00 a.m.–9:15 a.m.	Morning Platform Sessions	See session listing
9:00 a.m.–2:30 p.m.	<a href="#">Make-A-Difference Service Project</a>	
9:00 a.m.–11:00 a.m.	<a href="#">Career Navigation for Students and Recent Graduates</a>	Exhibit Hall
9:15 a.m.–10:00 a.m.	Coffee Break	Exhibit Hall
10:00 a.m.–11:15 a.m.	Morning Platform Sessions cont'd	See session listing
11:00 a.m.–12:00 p.m.	<a href="#">Advisory Group Summit – Fostering Collaboration</a>	250 CF
11:15 a.m.–1:00 p.m.	<a href="#">Student Noontime Seminar</a>	254 ABC
11:15 a.m.–1:00 p.m.	Lunch Break	
1:00 p.m.–2:00 p.m.	<a href="#">NASAC Open Student Assembly</a>	254 ABC
1:00 p.m.–2:15 p.m.	Afternoon Platform Sessions	See session listing
2:15 p.m.–3:00 p.m.	Coffee Break	Exhibit Hall
3:00 p.m.–4:15 p.m.	Afternoon Platform Sessions cont'd	See session listing
4:30 p.m.–5:15 p.m.	<a href="#">Keynote Speaker: Elaine Dorward-King</a>	Ballroom AC
5:00 p.m.–6:30 p.m.	Poster Social	Exhibit Hall
6:00 p.m.–8:00 p.m.	<a href="#">4<sup>th</sup> Annual Career Networking Reception</a>	Room 253
9:00 p.m.–Late	<a href="#">Student Mixer (ticket required)</a>	The Hotel and Club Elevate

## Business Meetings

TIME	MEETING	LOCATION
7:00 a.m.–8:30 a.m.	Sediment Advisory Group	251 F
7:00 a.m.–9:00 a.m.	North America Membership Committee	250 CF
8:00 a.m.–6:00 p.m.	Global Horizon Scanning Workshop	150 G
9:00 a.m.–10:30 a.m.	North America 2016 Program Committee Meeting	251 D
10:00 a.m.–11:00 a.m.	Career Development Committee	251 E
11:00 a.m.–12:00 p.m.	Advisory Group Summit - Fostering Collaboration	250 CF

## Business Meetings cont'd

TIME	MEETING	LOCATION
11:45 a.m.–12:45pm	Professional Training and Education Committee	251 E
11:45 a.m.–1:15 p.m.	Midwest Regional Chapter	251 D
12:00 p.m.–1:00 p.m.	Nano Advisory Group	251 F
12:00 p.m.–1:00 p.m.	Public Outreach Committee	151 G
1:00 p.m.–2:00 p.m.	North America Awards and Fellowships Committee	251 E
1:00 p.m.–2:00 p.m.	Omics Working Group	151 G
2:00 p.m.–5:00 p.m.	North America Board of Directors Meeting	250 CF
4:00 p.m.–5:00 p.m.	Pharmaceuticals Advisory Group	251 D
5:00 p.m.–6:00 p.m.	Carolinias Regional Chapter	251 F
5:00 p.m.–7:00 p.m.	Plant Advisory Group Open Meeting	251 D
6:30 p.m.–7:30 p.m.	Bioaccumulation Science Advisory Group	251 E

# STUDENT MIXER

THE HOTEL AND  
CLUB ELEVATE

**9:00 P.M.–LATE | \$20**

Expect drinks, music and dancing! Tickets include two drinks. Drinking age 21+. Transportation will not be provided but the venue is within walking distance of the convention center. Everyone is welcome.



## Make-a-Difference Service Project

9:00 a.m.–2:30 p.m. | US\$10



FRIENDS of  
Great Salt Lake

The event will include an outreach education opportunity involving elementary school students from the local community as well as a service project, the “Great Salt Lake Area Cleanup” partnered with Friends of Great Salt Lake. The location will be in the Great Salt Lake South Shore. Round trip transportation from the SLC convention center to the cleanup site, cleanup materials and lunch will be provided. Please dress appropriately and be prepared for rain or snow. The event will be held rain or shine.

In addition, SETAC will donate money collected for registration for this event and match the amount to make a donation to Friends of Great Salt Lake. Friends of the Great Salt Lake

You can sign up when you register for the meeting or add this outreach opportunity to your existing registration. Join us and give back to this community by helping protect and cleanup this valuable natural resource!

THANK YOU TO OUR SERVICE PROJECT SPONSOR:

**RAMBOLL** ENVIRON

Final day to play exhibitor bingo!  
Hand in your card by noon and join the drawing during the Poster Social.



# Student Noontime Seminar

Communicating Risk in 140 Characters or Less

11:15 p.m.-1:00 p.m. | 254 ABC | Free but pre-registration required

## Emily Skor

**Vice President, Communications, Consumer Healthcare Products Association (CHPA) and Executive Director, CHPA Educational Foundation**

Communicating risk and doing it well requires an understanding of core communications principles

and an appreciation for how your key audiences want to receive information. This holds true whether you are talking to fellow toxicologists, other scientists or non-scientists. Learn how to talk to an audience on their terms, so they understand what you are trying to convey and react accordingly. Whether you are talking to consumers, reporters, business leaders, policy-makers or your scientific colleagues, similar principles apply – know your audience, know their bias, know how they digest information, know

how they will judge the quality of your scientific results and know how they react emotionally to the notion of risk. When you effectively communicate the relevance and quality of your data you minimize the odds that people will misinterpret and make poor decisions as a result. Join Skor as she discusses why sound communications practice is equally as important as sound scientific practice.

THANK YOU TO OUR STUDENT NOONTIME SEMINAR SPONSOR:



# Daily Keynote Speaker

4:30 p.m.-5:15 p.m. | Ballroom AC

## Elaine Dorward-King

**Executive Vice President of Sustainability and External Relations, Newmont Mining Corporation**

Past SETAC North America President, Elaine Dorward-King, will discuss her experience developing and implementing

sustainable development, safety, health and environmental strategy and programs in the mining, chemical and engineering consulting sectors. Dorward-King was elected Executive Vice President of Sustainability and External Relations for Newmont Mining Corporation in March 2013. Prior to joining Newmont, she served as Managing Director of Richards Bay Minerals in South Africa from December 2010 through February 2013. Dorward-King previously served as the Global Head of Health,

Safety and Environment at Rio Tinto from 2002 through 2010 and also held leadership positions with Rio Tinto's copper and borates businesses. Prior, she worked for Ebasco Environmental and Monsanto as a chemist, research specialist and product manager. She brings 27 years of leadership experience in developing and implementing sustainable development, safety, health and environmental strategy and programs in the mining, chemical and engineering consulting sectors. She holds a B.S. magna cum laude from Maryville College and a Ph.D. in Analytical Chemistry from the Colorado State University. She serves on the boards of two non-profit organizations, Resources for the Future and Project WET.

# 4<sup>th</sup> Annual Career Networking Reception

6:00 p.m.-8:00 p.m. | Room 253 | Cost: \$30

## Recognize, Reassess and Redefine: How to Take Control of Your Career and Take it to the Next Level

Interested in recharging your career and engaging with other SETAC professionals from different sectors? This reception is hosted by the Career Development Committee and is geared towards early to mid-career professionals. There will be two

guest speakers, followed by informal networking opportunities with senior SETAC professionals. The cost is \$30 and includes two drink tickets and light snacks.

# Wednesday Morning Platform Presentations

	8:00-8:15	8:20-8:35	8:40-8:55	9:00-9:15
250 AB	<b>Munitions Compounds in the Environment: Release, Transport, Transformation, Exposure, Effects and Remediation</b>   Robert George, Guilherme Lotufo  377 Overview of environmental risks posed by underwater military munitions   <i>G. Lotufo</i>	<b>378 Techniques and Results of a Deep-Water Munitions Assessment</b>   <i>M. Edwards</i>	<b>379 A User-Friendly Graphic Model for the Release Rate of Munitions from A Breached Shell in Marine Environment</b>   <i>P. Wang</i>	<b>380 Corrosion Evaluation of Underwater Military Munitions Recovered after 65+ Years</b>   <i>R. George</i>
250 DE	<b>Sturgeon Ecotoxicology: Contaminant Risks to Endangered Populations</b>   Markus Hecker, Donald Tillitt, Jonathon Doering  385 Sublethal effects on behavior of white sturgeon ( <i>Acipenser transmontanus</i> ) exposed to copper   <i>H. Puglis</i>	<b>386 Linking magnitude of compensatory responses to life-stage specific sensitivity of white sturgeon (<i>Acipenser transmontanus</i>) exposed to metals</b>   <i>S. Tang</i>	<b>387 LA-ICP-MS to examine temporal metal signatures in pectoral fin rays of white sturgeon (<i>Acipenser transmontanus</i>) from San Francisco Bay</b>   <i>V. Palace</i>	<b>388 Physiological Changes in Juvenile White Sturgeon (<i>Acipenser transmontanus</i>) Exposed to Dietary Selenomethionine</b>   <i>J. Zee</i>
251 AB	<b>Recent Advances in Endocrine Disruptor Screening - Applications for Ecotoxicology</b>   Katherine Coady, Patience Browne  393 Use of OASIS Estrogen/Androgen Receptor Binding QSAR Predictions in Combination with In Vitro ToxCast Assays   <i>K. Coady</i>	<b>394 Integrated Bioactivity-Exposure Ranking of the EDSP Chemical Universe</b>   <i>P. Browne</i>	<b>395 Developmental plasticity induced by ethynodiol in the self-fertilizing mangrove rivulus</b>   <i>A. Voisin</i>	<b>396 Application of a Framework for Extrapolating Chemical Effects Across Species in Pathways Controlled by Estrogen Receptor-<math>\alpha</math></b>   <i>C. LaLone</i>
Ballroom AC	<b>Canadian Oil Sands: Advancing Science for an Expanding Industry - Part 1</b>   Richard Frank, Jonathan Martin  400 Update on Atmospheric Deposition and Assessment of Effects of Contaminants in the Athabasca Oil Sands   <i>J. Charland</i>	<b>401 Assessing Forest Health in the Athabasca Oil Sands Region of Alberta</b>   <i>K. Percy</i>	<b>402 Measurement of polycyclic aromatic compounds in epiphytic lichens by GCMS and GC-TOF-MS for receptor modeling in the Alberta Oil Sands Region</b>   <i>W. Studabaker</i>	<b>403 Spatial and temporal trends of polycyclic aromatic compounds in the Athabasca oil sands region in Sphagnum moss and peat cores</b>   <i>J. Martin</i>
Ballroom B	<b>Systems Biology Approaches for Advancing Adverse Outcome Pathways for Risk Assessment</b>   Cheryl Murphy, Natalia Vinas  408 Accelerating Adverse Outcome Pathway Development via Systems Approaches   <i>S. Edwards</i>	<b>409 A three-tiered approach for linking pharmacokinetic considerations to the adverse outcome pathway framework for chemical-specific risk assessment</b>   <i>C. Tan</i>	<b>410 Use of High Throughput and Computational Approaches for Endocrine Disruptor Screening</b>   <i>D. Dix</i>	<b>411 Applications of neurobehavioral analysis in AOP models and risk assessment</b>   <i>M. Carvan</i>
Ballroom D	<b>Aquatic Toxicology and Ecology General - Part 1</b>   Jim Oris  416 Brominated flame retardants: Evidence for altered thyroid signaling and neurological development in <i>Xenopus laevis</i> tadpoles   <i>M. Sellin Jeffries</i>	<b>417 Assessing Relationships for Guideline Derivation: Water Hardness and Chloride Toxicity towards Aquatic Life</b>   <i>J. McIvor</i>	<b>418 Developing Toxicity Test Protocols for Native Arabian Gulf Species for Coastal Marine Zone Risk Assessment</b>   <i>S. Saeed</i>	<b>419 Evaluation and improvements of a mayfly, <i>Neocloeon (Centroptilum) triangulifer</i> (Ephemeroptera: Baetidae) toxicity test method</b>   <i>J. Lazorchak</i>
Ballroom E	<b>Alternatives Assessment - Current Technical Challenges in Implementation</b>   Alex Stone, Jay Tunkel, Timothy Malloy  424 Evaluation of the Interstate Chemicals Clearinghouse (IC2) Alternatives Assessment Guide   <i>J. Rutkiewicz</i>	<b>425 From Incremental to Fundamental Chemical Substitution: Addressing the Lock-In Problem</b>   <i>P. Fantek</i>	<b>426 Methylene Chloride Paint Strippers Alternatives Analysis: Hazard Screening Using GreenScreen® for Safer Chemicals</b>   <i>B. Wang</i>	<b>427 Multi-Criteria Decision Analysis methods as a framework for comparative risk assessment and in the case of insecticide use in pome fruit production</b>   <i>J. Pouzou</i>
Ballroom F	<b>Fate and Effects of Metals: Biogeochemical Perspective</b>   Richard Carbonaro, Kevin Rader  432 Development of a Passive Lignin Porewater Sampler for Metals   <i>S. Clough</i>	<b>433 Effect of NOM and water hardness on DGT prediction of bioaccumulation by yellow lampmussel and fathead minnow</b>   <i>G. Mills</i>	<b>434 Accumulation of Rare Earth Elements onto naturally occurring biofilms at three acid mine drainage field sites</b>   <i>L. Ashby</i>	<b>435 Trace elements in bivalve shells: Records of contamination or contaminated record?</b>   <i>W. Shoultz-Wilson</i>
Ballroom G	<b>Using Population Models to Improve Ecological Risk Assessment: Balancing Complexity With Practicality</b>   Christopher Salice, Nathan Schumaker, Robert Pastorok  440 Bringing ecological context to endangered species risk assessments using population modeling: challenges, opportunities, and a path forward   <i>K. Kapo</i>	<b>441 Quantifying the population-level effects of wind energy development and white-nose syndrome on the federally endangered Indiana bat</b>   <i>R. Erickson</i>	<b>442 Spatially explicit case study of estuarine fish following the Deepwater Horizon Oil spill: evaluating tradeoffs in model complexity</b>   <i>S. Raimondo</i>	<b>443 How does temporal variability in model parameters affect the risk conclusions from MCnest?</b>   <i>M. Etterson</i>
Ballroom H	<b>EDCs and Pharmaceuticals in the Environment</b>   Marc Mills, James Lazorchak, Kyle Fetter, Ruth Marfil-Vega  448 The Effects of DOM on the Photochemistry and Toxicity of Photoproducts of Triclosan and Triclocarban and their Mixtures to <i>Daphnia magna</i>   <i>K. Albanese</i>	<b>449 Fate and biologic effect of progesterone exposure in aquatic sediment</b>   <i>S. Bartelt-Hunt</i>	<b>450 Inputs and transboundary fluxes of organic contaminants in the Lower Red River, Manitoba, Canada</b>   <i>L. Cuscito</i>	<b>451 Assessing the occurrence of wastewater contaminants in Cambridge Bay, Nunavut: Interpretation and recommendations</b>   <i>L. Chaves-Barquier</i>
Ballroom I	<b>Pesticide Dose and Exposure: Effects on the Environment, Target and Non-Target Organisms</b>   Keith Solomon  456 Pesticide dose: Using conceptual models of exposure to understand risks   <i>K. Solomon</i>	<b>457 Indirect effects of herbicides on biota in edge-of-field habitats: current understanding and research needs</b>   <i>R. Prosser</i>	<b>458 Monitoring unintentional effects of plant protection products and other environmental contaminants on non-target species: how can we manage?</b>   <i>P. Berry</i>	<b>459 Improvements on the Methodology for Assessing the Effects of Commercial Test Substances on Beneficial Non-Target Honey Bees in a Laboratory Setting</b>   <i>M. Huang</i>
Ballroom J	<b>Contaminated Sediment Remediation: Assessing and Measuring Remedy Effectiveness</b>   Marc Mills, Amy Mucha, David Walters  464 Trends in Pesticide and Flame Retardant in Sediment and Fish from the Pine River, MI Associated With the Velsicol Chemical Superfund Site   <i>F. Dillon</i>	<b>465 Measuring food web tissue contamination and DNA damage in response to remediation of PCB contaminated sediments in the Ottawa River Area of Concern</b>   <i>J. Lazorchak</i>	<b>466 Evaluation of Native Benthic Invertebrate Community Response to In Situ Activated Carbon Sediment Remediation Treatment</b>   <i>M. Grover</i>	<b>467 Bioaccumulation Monitoring and Modeling of PCBs after the first full-scale application of activated carbon to a 5-acre lake in Mirror Lake (Dover, DE)</b>   <i>E. Patmont</i>
Track	<b>Aquatic Toxicology and Ecology</b>	<b>Integrated Env Assessment and Management</b>	<b>Environmental or Analytical Chemistry</b>	<b>Linking Science and Social Issues</b>

# Wednesday Morning Platform Presentations

10:00-10:15		10:20-10:35		10:40-10:55		11:00-11:15		250 AB
<b>Munitions Compounds in the Environment: Release, Transport, Transformation, Exposure, Effects and Remediation</b>   Robert George, Guilherme Lotufo								
381 Tracing the cycling and fate of the explosive 2,4,6-trinitrotoluene in coastal marine systems with a stable isotopic tracer, <sup>15</sup> N - [TNT]   R. Smith	382 Biotic uptake and incorporation of munitions derived nitrogen measured in three simulated coastal habitats   M. Ballentine	383 Enhanced photo induced toxicity of Insensitive Munitions Mixtures   A. Kennedy	384 Kinetic Uptake and Elimination of Insensitive Munitions in the earthworm, <i>Eisenia fetida</i>   J. Coleman					250 DE
<b>Sturgeon Ecotoxicology: Contaminant Risks to Endangered Populations</b>   Markus Hecker, Donald Tillitt, Jonathon Doering								
389 Can identities of key amino acids in the ligand binding domain of AhR be used to predict the sensitivity of endangered sturgeons to dioxins?   J. Doering	390 Understanding how PCB toxins cause heart defects early in fish development   C. Singelmann	391 Transcriptomic and Cell Process Pathways Altered by Laboratory Exposure of Shovelnose Sturgeon to Oil from the Deepwater Horizon Event   C. Lavelle	392 DNA Fragmentation and Repair in Gulf Sturgeon ( <i>Acipenser oxyrinchus desotoi</i> ) Following the Deepwater Horizon Oil Spill   J. Jenkins					250 AB
<b>Recent Advances in Endocrine Disruptor Screening – Applications for Ecotoxicology</b>   Katherine Coady, Patience Browne								
397 The Use of Next-Generation Sequencing Techniques to Determine Biomarkers for Developmental Toxicity – A Case Study using Retinoic Acid   M. Overturf	398 Ligand-Dependent Receptor Assembly as an Endpoint for the High-Throughput Screening of Chemicals for Endocrine Activity   C. Holmes	399 Deciphering an Environmental-Endocrine Signaling Pathway for the Identification of Efficacious Screening Endpoints   E. Medlock	Discussion					251 AB
<b>Canadian Oil Sands: Advancing Science for an Expanding Industry – Part 1</b>   Richard Frank, Jonathan Martin								
404 Characterizing and quantifying PAHs in the Athabasca oil sands region using compound-specific isotope analysis   J. Ahad	405 Understanding Controls on Mercury and Methylmercury Deposition to the Oil Sands Region   C. Willis	406 Estimation of vanadium guidelines for the protection of aquatic life relevant to the Canadian Oil Sands region   S. Schiffer	407 Using natural variability to develop triggers for designing and adapting environmental monitoring programs   K. Munkittrick					Ballroom AC
<b>Systems Biology Approaches for Advancing Adverse Outcome Pathways for Risk Assessment</b>   Cheryl Murphy, Natalia Vinas								
412 Conceptualizing Adverse Outcome Pathways for Cyclooxygenase Inhibitors using Transcriptomic and Metabolomic Characterization   D. Martinovic-Weigelt	413 Developing Molecular Guidelines for Chemicals with Reduced Oxidative Stress Potential through Systems Analysis of ToxCast   F. Melnikov	414 Driving Risk Decisions Through Information Integration and Visualization Using Systems Biology, Ontologies and the AOPXplorer   L. Burgoon	415 Consideration of Social Issues for Advancing Adverse Outcome Pathways for Risk Assessment   K. Elliott					Ballroom B
<b>Aquatic Toxicology and Ecology General – Part 1</b>   Jim Oris								
420 Mechanisms of Tolerance to Chlorpyrifos in Resurrected <i>Daphnia pulicaria</i> Genotypes   A. Simpson	421 A multi-assay evaluation of the sub-lethal effects of Chlorpyrifos on developing zebrafish ( <i>Danio rerio</i> )   T. Curran	422 Photocatalytic Degradation of Commercial Naphthenic Acids using Fixed-film TiO <sub>2</sub>   A. McQueen	423 Multiple stressors over multiple generations: assessing the combined risk of climate change and endocrine disruptors   B. DeCourtene					Ballroom D
<b>Alternatives Assessment – Current Technical Challenges in Implementation</b>   Alex Stone, Jay Tunkel, Timothy Malloy								
428 Methylene Chloride Paint Strippers: Lessons Learned from a California Consumer Products Regulation Alternatives Analysis Demonstration Project   M. Jacobs	429 Results and lessons learned from the multi-disciplinary iNEMI alternative materials assessment project   C. Robertson	430 Reverse engineering the PBT paradigm: Designing safer chemicals by applying the lessons learned from alternative assessment   J. Tunkel	431 Advancing Alternatives Assessment for Safer Chemical Substitution: A Research & Practice Agenda   J. Tickner					Ballroom E
<b>Fate and Effects of Metals: Biogeochemical Perspective</b>   Richard Carbonaro, Kevin Rader								
436 Spatial Contaminant Patterns of Metals in a Great Lakes Area of Concern   J. LaFontaine	437 Factors affecting arsenic mobilization from sediments collected from a prairie reservoir, Buffalo Pound Lake, Saskatchewan, Canada   L. D'Silva	438 Release of Metals During Sediment Resuspension Events   K. Farley	439 Development of linear free energy relationships for estimating metal binding to sulfur functional groups present in natural organic matter   R. Carbonaro					Ballroom F
<b>Using Population Models to Improve Ecological Risk Assessment: Balancing Complexity With Practicality</b>   Christopher Salice, Nathan Schumaker, Robert Pastorok								
444 Design and development of spatially-explicit IBMs and population models for risk assessment: A brief introduction to the HexSim   N. Schumaker	445 Individual-based and matrix model approaches for estimating pesticide risk to an endangered songbird: model comparison along a continuum of complexity   D. Dishman	446 Assessing risks of pesticides to listed species using population modeling: case study of an endangered plant   A. Schmalke	447 How fisheries scientists use population models and what we can learn from their experience   L. Barnthouse					Ballroom G
<b>EDCs and Pharmaceuticals in the Environment</b>   Marc Mills, James Lazorchak, Kyle Fetter, Ruth Marfil-Vega								
452 Evaluating the movement of pharmaceuticals in soil, groundwater, and surface water at a municipal wastewater land application site   A. McEachran	453 Rainfall-Induced Runoff of Anthropogenic Waste Indicators from Agricultural Test Plots Applied with Municipal Biosolids   J. Gray	454 Screening of the levels of selected steroid hormones in water of some domestic and industrial sewerage channels in Cape Town environment   O. Olatunji	455 Attenuation of pharmaceuticals along rivers: A major source of transformation products?   Z. Li					Ballroom H
<b>Pesticide Dose and Exposure: Effects on the Environment, Target and Non-Target Organisms</b>   Keith Solomon								
460 The art of arthropods: Crafting a new paradigm for listed terrestrial invertebrates in pesticide risk assessment   C. Aubee	461 Glyphosate Hormesis: An Overview   S. Duke	462 The time factor in dose response relationships – old ideas in new light   J. Purdy	463 Application of a tiered approach to assess aquatic risks posed by pesticides in an intensive irrigation scheme   V. Wepener					Ballroom I
<b>Contaminated Sediment Remediation: Assessing and Measuring Remedy Effectiveness</b>   Marc Mills, Amy Mucha, David Walters								
468 Source apportionment of PCDD/Fs in the Passaic River   R. Lohmann	469 The effect of sediment AC amendment on pelagic and benthic exposures to fish   H. Fadaei Khoei	470 Analysis of bioremediation processes in oil contaminated shoreline sediments   T. Størseth	471 Three-domain mass transfer model to predict the sorption kinetics and mobility of organic compounds in biochar amended soil   S. Trinh					Ballroom J
<b>Regulatory Directions</b>		<b>Remediation/Restoration</b>		<b>Special Symposia</b>		<b>Terrestrial or Wildlife Toxicology and Ecology</b>		Track



Presentation will not be recorded.

# Wednesday Afternoon Platform Presentations

	1:00-1:15	1:20-1:35	1:40-1:55	2:00-2:15
250 AB	<b>Integrated Environmental Assessment and Management General - Part 2</b>   Tim Canfield, Christopher McCarthy  <b>472</b> What Kind of Risk Assessor Are You?   <i>R. DeHate</i>	<b>473</b> Effect of Breimont Attacke Pesticide on Soil Microbiota   <i>C. Mgbemena</i>	<b>474</b> Is Manure a RCRA Solid Waste?   <i>W. Goodfellow</i>	<b>475</b> Development and Use of Wild Game Consumption Rates in Human Health Risk Assessments   <i>J. Conder</i>
250 DE	<b>Integrating Environmental Health and LCA into Chemical Alternatives Assessment</b>   Jennifer Tanir, Lauren Heine  <b>480</b> Recent Efforts to Advance the Understanding and Practice of Alternatives Assessments   <i>E. Connor</i>	<b>481</b> Towards a multi-attribute tool: Incorporating hazard and exposure metrics into life cycle analysis   <i>A. Mason</i>	<b>482</b> Intersection of Health and LCA: Utilizing Life Cycle Inventory Data   <i>N. Santero</i>	<b>483</b> Cross-pollinating life cycle assessment and chemical human exposure modeling to support decision making through improved sustainability analysis   <i>S. Csiszar</i>
251 AB	<b>Exploring the Intersection Between Ecosystem Ecology and Ecotoxicology: Recent Advances, Pitfalls and Recommendations</b>   Michelle Hornberger, Emma Rosi-Marshall  <b>488</b> Defining ecosystem toxicology I: Contaminant and energy fluxes through food webs as an intersection between ecosystem science and ecotoxicology   <i>D. Walters</i>	<b>489</b> Defining Ecosystem Toxicology II: Ecosystem function as response variables to contaminants   <i>E. Rosi-Marshall</i>	<b>490</b> Context-dependent responses of stream ecosystems to contaminants and other anthropogenic stressors   <i>W. Clements</i>	<b>491</b> Role of functional processes in identifying effects of metal mining on stream macroinvertebrates   <i>M. Hornberger</i>
Ballroom AC	<b>Canadian Oil Sands: Advancing Science for an Expanding Industry - Part 2</b>   Richard Frank, Jonathan Martin  <b>496</b> Refined models to predict the acute toxicity of Oil Sands process affected waters to early-life stages of Fathead minnow ( <i>Pimephales promelas</i> )   <i>G. Morandi</i>	<b>497</b> Aquatic Toxicity of acid extractable organics: modeling and alternative test methods   <i>A. Redman</i>	<b>498</b> Preparative fractionation of oil sands process-affected water for toxicological evaluations   <i>A. Bauer</i>	<b>499</b> A non-targeted chemical analysis strategy for identification of organic chemicals that cause acute toxicity of oil sands process-affected water   <i>H. Peng</i>
Ballroom B	<b>Fate, Toxicology or Risk Assessment of Materials of Interest to the Military</b>   Ron Checkai, Doris Anders, Mark Johnson, David Johnson  <b>504</b> Environmental Available, Bioavailable, and Total Metal: What is Appropriate for Risk Assessments at Military Sites   <i>J. Clausen</i>	<b>505</b> Ecological Risk Assessment at a Canadian Force Base—Part 1: Problem Formulation   <i>D. Johnson</i>	<b>506</b> Short-Term Toxicity and Long-Term Developmental Effects of 3-Nitro-1,2,4-Triazol-5-One (NTO) to the Northern Leopard Frog ( <i>Lithobates pipiens</i> )   <i>D. Pillard</i>	<b>507</b> Biological Response & Global Transcript-Expression Comparisons in <i>Rana pipiens</i> Tadpoles to Screen Conventional versus Inensitive Munitions   <i>K. Gust</i>
Ballroom D	<b>Aquatic Toxicology and Ecology General - Part 2</b>   Marlo Sellin Jeffries  <b>512</b> The Organizational Effects of PBDE-47 Exposure on Reproductive Function in Early Life Stage Fathead Minnows   <i>L. Thornton</i>	<b>513</b> The combined effects of metal contamination and sediment deposition on benthic invertebrate colonization at North Fork Clear Creek Superfund site, CO   <i>B. Dabney</i>	<b>514</b> Non-Lethal Detection of Intersex (Testicular Oocytes) in Black Basses ( <i>Micropterus</i> spp.) using Laparoscopy   <i>A. MacLeod</i>	<b>515</b> Effects of the presence of plankton on the acute toxicity and morphological effects of crude oil to larval bay anchovy ( <i>Anchoa mitchilli</i> )   <i>S. Webb</i>
Ballroom E	<b>Modeling Chemical Exposure - Part 1</b>   Todd Gouin, Matthew MacLeod  <b>520</b> Complex exposures and the role of exposure modeling in characterizing the eco-exposome" in the 21st Century   <i>T. McKone</i>	<b>521</b> Catalyzing Innovations in Modeling Chemical Exposures   <i>J. Orme-Zavaleta</i>	<b>522</b> An Integrated Approach to Assessing Exposure and Ecotoxicological Impacts in the State of Qatar   <i>C. Warren</i>	<b>523</b> Quantification of Dynamic Exposures of Aquatic Biota to Pollutant Releases Using an Integrated Process- and Activity-Based Model System   <i>D. French-McCay</i>
Ballroom F	<b>Fate and Effects of Metals: Regulatory and Risk Assessment Perspective</b>   Diana Eigner, Andrea Matzke  <b>528</b> Beyond Standards: Challenges for Application of Biotic Ligand Model-based Water Quality Standards to Permits and Impaired Waters Designations   <i>R. Gensemer</i>	<b>529</b> Application of a fixed monitoring benchmark approach to evaluate compliance with water quality criteria: copper BLM as a case study   <i>A. Ryan</i>	<b>530</b> Adoption and implementation of biotic ligand-based water quality criteria   <i>L. Guenzel</i>	<b>531</b> Application of the Biotic Ligand Model & Fixed Monitoring Benchmarks for resolving water quality spatial variability in setting site-specific criteria   <i>J. Gondek</i>
Ballroom G	<b>Weight of Evidence Assessments and Potential Follow-up Testing to Elucidate Endocrine Disruption</b>   Ellen Mihaich, Lisa Ortego  <b>536</b> Use of Relevant Information in Developing an Integrated Testing Strategy to Reduce Animal Use in the USEPA Endocrine Disruptor Screening Program   <i>P. Bishop</i>	<b>537</b> Using Predictive Information for Endocrine Prioritization and Screening: Example with a Triazole Fungicide   <i>K. Paul</i>	<b>538</b> The fidelity of adverse outcome pathways: a case study with Bisphenol A   <i>G. Van Der Kraak</i>	<b>539</b> Reflections on Biological Variability: An Analysis of Control Data from the US Endocrine Disruptor Screening Program List 1 Screening Battery   <i>A. Schapau</i>
Ballroom H	<b>Antidepressants and Perfluorochemicals: Divergent Chemistries, Convergent Environmental Persistence and Effects</b>   Edward Furlong, Christopher Higgins, Heiko Schoenfuss  <b>543</b> Opening Pandora's Box on Per- and Polyfluoroalkyl Substances (PFASs) in Groundwater: The Legacy of Dr. Melissa Schultz   <i>J. Field</i>	<b>544</b> Fluorochemicals in wastewater: the long-term impacts of a simple mass balance study   <i>C. Higgins</i>	<b>545</b> Partitioning of benzodiazepines in soils and its influence on uptake in food crops   <i>M. Williams</i>	<b>546</b> Uptake and Disposition of Pharmaceuticals by Bluegill Exposed at Constant Concentrations in a Flow-Through Aquatic Exposure System   <i>E. Furlong</i>
Ballroom I	<b>Soil Contaminants: Fate, Bioavailability, Ecotoxicology and Risk Assessment</b>   Michael Simini, Ming Fan, Theresa Phillips  <b>551</b> A Screening Level Ecological Risk Assessment Framework for Urban Soils   <i>K. Kellock</i>	<b>552</b> Sensitivity of soil microorganisms to Ag2S and Ag nanoparticles: a new method to quantify sensitivity using molecular-based techniques   <i>C. Doolette</i>	<b>553</b> Effects of aging and soil properties on the bioavailability and toxicity of vanadium to soil invertebrates   <i>R. Lanno</i>	<b>554</b> Predicting Mammalian Polycyclic Aromatic Hydrocarbon Bioavailability from Historically Contaminated Soil   <i>K. James</i>
Ballroom J	<b>Advanced Analytical Methods for Contaminant Discovery</b>   Eunha Hoh, Nathan Dodder, June-Soo Park  <b>559</b> Identification and Characterization of Glucocorticoid Agonists in the Aquatic Environment   <i>S. Snyder</i>	<b>560</b> Tracking Organic Transformation Products during Chlorination in Wastewater Treatment   <i>M. Bedner</i>	<b>561</b> Non-targeted Analysis of Samples from the Oil Sands Area of Alberta, Canada   <i>C. Manzano</i>	<b>562</b> Non-Targeted Analysis of Petroleum Metabolites in Groundwater at Historic Fuel Release Sites by GCxGC-TOFMS   <i>R. Mohler</i>
Track	<b>Aquatic Toxicology and Ecology</b>	<b>Integrated Env Assessment and Management</b>	<b>Environmental or Analytical Chemistry</b>	<b>Linking Science and Social Issues</b>

# Wednesday Afternoon Platform Presentations

3:00-3:15		3:20-3:35		3:40-3:55		4:00-4:15			
<b>Integrated Environmental Assessment and Management General - Part 2</b>   Tim Canfield, Christopher McCarthy									
<b>476</b> Methodological guidance in evaluating environmental and economic aspects of wood products: A combined and simplified approach   <i>H. Davidson</i>		<b>477</b> Evaluation of Mercury and PCB Trends in San Francisco Bay Region Stormwater   <i>D. Yee</i>		<b>478</b> The potential impact of deposition from static rocket motor testing on crops   <i>W. Doucette</i>		<b>479</b> The Application and Misapplication of Directed Acyclic Graphs for Causal Inference in Ecology   <i>R. Kashuba</i>			
<b>Integrating Environmental Health and LCA into Chemical Alternatives Assessment</b>   Jennifer Tanir, Lauren Heine									
<b>484</b> Route- and Form-specific Hazard Assessment Using GreenScreen® for Safer Chemicals: A Case Study of Titanium Dioxide, Carbon Black and Silica   <i>B. Wang</i>		<b>485</b> Performance and hazard assessment of alternative fluorinated and non-fluorinated DWR (Durable Water Repellent) technologies   <i>I. Cousins</i>		<b>486</b> Incorporating Life Cycle Thinking into Alternatives Analysis   <i>K. Magnuson</i>		<b>487</b> Consistently Integrating Life-Cycle Impact Metrics into Chemical Alternatives Assessment   <i>P. Fantke</i>			
<b>Exploring the Intersection Between Ecosystem Ecology and Ecotoxicology: Recent Advances, Pitfalls and Recommendations</b>   Michelle Hornberger, Emma Rosi-Marshall									
<b>492</b> Cross-ecosystem toxicology: How aqueous contaminants manifest effects in terrestrial ecosystems   <i>T. Schmidt</i>		<b>493</b> Biofilm response to metal-contaminated sediments – the importance of ecosystem context for managing polluted ecosystems   <i>A. Harrison</i>		<b>494</b> Using community ecotoxicology to assess effects of micropollutants from wastewater effluents   <i>A. Tlili</i>		<b>495</b> Nanomaterial impacts in the real world: Ecological Context and Ecological Impacts of Nanomaterials   <i>E. Bernhardt</i>			
<b>Canadian Oil Sands: Advancing Science for an Expanding Industry – Part 2</b>   Richard Frank, Jonathan Martin									
<b>500</b> Long term effects in fathead minnow exposed to oil sands sediments early in life   <i>J. Parrott</i>		<b>501</b> Effects of Oil Sands Reclaimed Wetlands on Native Amphibians   <i>J. Klemish</i>		<b>502</b> Diluted bitumen causes deformities and molecular responses indicative of oxidative stress in Japanese medaka embryos   <i>B. Madison</i>		<b>503</b> Naphthenic acid mixtures accelerate differentiation of mouse embryonic stem cells and promotes cardiac development   <i>G. Van Der Kraak</i>			
<b>C</b>									
<b>Fate, Toxicology or Risk Assessment of Materials of Interest to the Military</b>   Ron Checkai, Doris Anders, Mark Johnson, David Johnson									
<b>508</b> Coupling biotransformation of 2,4-dinitroanisole (DNAN) in anaerobic soil solutions to a multidimensional toxicity assay using zebrafish embryos   <i>C. Olivares</i>		<b>509</b> Environmental Fate, Transport, and Toxicity Considerations in Fielding Inensitive Munitions: Lessons Learned   <i>M. Johnson</i>		<b>510</b> Derivation of Clean-up Values Protective of Soil Ecological Receptors for Nitrogen-Based Energetic Soil Contaminants   <i>R. Kuperman</i>		<b>511</b> PFOS and PFOA: Ecological Risk Assessment Methods, Findings and Decisions   <i>U. Vedagiri</i>			
<b>O</b>									
<b>Aquatic Toxicology and Ecology General – Part 2</b>   Marlo Sellin Jeffries									
Discussion		<b>517</b> Suspended Sediment Effects on Smallmouth Bass ( <i>Micropterus dolomieu</i> )   <i>B. Suedel</i>		<b>518</b> Review of the Environmental Fate and Effects of Drill Cuttings and Associated Drilling Fluids Discharged from Offshore Oil and Gas Operations   <i>D. Sanzone</i>		<b>519</b> Occurrence and toxicity of current-use pesticides in sediment in agricultural waterways: a case study in Fujian, South China   <i>Y. Wei</i>			
<b>E</b>									
<b>Modeling Chemical Exposure – Part 1</b>   Todd Gouin, Matthew MacLeod									
<b>524</b> A Proposed Model for the Interpretation of Exposure Data from the New OECD305 Bioaccumulation Test Guideline   <i>F. Gobas</i>		<b>525</b> Estimating the effect of Arctic Canadian dietary transitions on human exposure to persistent organic pollutants   <i>M. Binnington</i>		<b>526</b> Uncertainty and variability in the atmospheric formation of long-chain PFCAs   <i>C. Thackray</i>		<b>527</b> Cyclic Volatile Siloxanes: A Potential Source of Silicon Nanoparticles? Seasonal Study of North American Cyclic Volatile Siloxanes   <i>N. Janecek</i>			
<b>R</b>									
<b>Fate and Effects of Metals: Regulatory and Risk Assessment Perspective</b>   Diana Eigner, Andrea Matzke									
<b>532</b> Tales from the Trenches: Lessons Learned with the Fixed Monitoring Benchmark   <i>C. Claytor</i>		<b>533</b> Using the Fixed Monitoring Benchmark Approach to Derive BLM-Based Freshwater Copper Criteria   <i>S. Tobiason</i>		<b>534</b> The Use of Multi-Linear Regression to Derive Site-Specific Water Quality Criteria for Metals: A Complementary Approach to the Biotic Ligand Model   <i>K. Brix</i>		<b>535</b> Anatomy of a giant: constructing and deconstructing ten years of sublethal toxicity data from metal mines in Canada   <i>L. Van der Vliet</i>			
<b>E</b>									
<b>Weight of Evidence Assessments and Potential Follow-up Testing to Elucidate Endocrine Disruption</b>   Ellen Mihai, Lisa Ortego									
<b>540</b> Identifying Endocrine Disruptors: The complexities of distinguishing endocrine activity from systemic toxicity   <i>K. Coady</i>		<b>541</b> How Potency Determinations Can Clarify Tier 1 and Streamline Tier 2   <i>C. Borgert</i>		<b>542</b> Make Sure the Pieces Fit: An Evaluation of the Estrogen Pathway Response for Triclosan   <i>E. Mihai</i>		Discussion			
<b>K</b>									
<b>Antidepressants and Perfluorochemicals: Divergent Chemistries, Convergent Environmental Persistence and Effects</b>   Edward Furlong, Christopher Higgins, Heiko Schoenfuss									
<b>547</b> The effects of an SSRI antidepressant mixture on hybrid striped bass brain chemistry and predatory behavior   <i>L. Sweet</i>		<b>548</b> Antidepressant pharmaceuticals and their metabolites affect growth and larval behavior in fathead minnows across generations   <i>H. Schoenfuss</i>		<b>549</b> Spatial and Temporal Occurrence of Estrogenic Activity in Urban Effluent-Dominated Systems   <i>N. Cipolletti</i>		<b>550</b> Monitor & Mentor: Environmental Chemistry at The College of Wooster and the Legacy of Melissa Schultz   <i>P. Edmiston</i>			
<b>Soil Contaminants: Fate, Bioavailability, Ecotoxicology and Risk Assessment</b>   Michael Simini, Ming Fan, Theresa Phillips									
<b>555</b> Diastereoisomer-Specific Translocation of HBCD in <i>N. benthamiana</i> cultured on Humic Acid (HA) amended Soil   <i>M. Son</i>		<b>556</b> Advanced methods for modeling toxicity of metal mixtures to plants   <i>Y. Le</i>		<b>557</b> Implementation of bioavailability for ecological risk assessment of lead in European soils   <i>M. Chowdhury</i>		<b>558</b> The Biogeochemistry of Indium, Gallium, and Germanium in Mine Wastes   <i>S. White</i>			
<b>Advanced Analytical Methods for Contaminant Discovery</b>   Eunha Hoh, Nathan Dodder, June-Soo Park									
<b>563</b> Exploring human exposure to organic micropollutants in the indoor environment by non-targeted LC-HRMS analysis   <i>L. Ferguson</i>		<b>564</b> SRM 2585 Organic Contaminants in House Dust as a material for evaluating non-targeted screening tools   <i>B. Place</i>		<b>565</b> Workflow and Proof of Concept for Non-Targeted Analysis of Environmental Samples by LC-MS/MS   <i>C. Rosal</i>		<b>566</b> Discovering Emerging Chemicals in Lake Trout: Data Reduction and Optimizing HRMS Data   <i>B. Crimmins</i>			
<b>Regulatory Directions</b>		<b>Remediation/Restoration</b>		<b>Special Symposia</b>		<b>Terrestrial or Wildlife Toxicology and Ecology</b>			
<b>Track</b>	<b>Ballroom J</b>	<b>Ballroom I</b>	<b>Ballroom H</b>	<b>Ballroom G</b>	<b>Ballroom F</b>	<b>Ballroom E</b>	<b>Ballroom D</b>	<b>Ballroom C</b>	<b>Ballroom B</b>

# Wednesday Poster Presentations

## Schedule

Setup 7:00 a.m.–8:00 a.m.

Take Down 6:30 p.m.–6:45 p.m.

Presenters are expected to attend their poster during all break periods and evening poster social to discuss their work with scientists visiting their poster.

**Coffee Breaks** 9:15 a.m.–10:00 a.m. and 2:15 p.m.–3:00 p.m.

**Lunch Break** 11:15 a.m.–1:00 p.m.

**Poster Social** 5:00 p.m.–6:30 p.m.

### Fate, Toxicology or Risk Assessment of Materials of Interest to the Military

Ron Checkai, Doris Anders, Mark Johnson, David Johnson

**WP001** Characterization of Organophosphorus Nerve Agent VX Droplets on Plant Foliage | *M. Simini*

**WP002** Environmental Progress: The Effective Half-Life of the Chemical Warfare Agent VX on Plant Foliage | *R. Checkai*

**WP003** Weathering and photodegradation effects on fate and transport properties for alternative fuels of interest to DoD | *R. George*

### Assessing Ecological Risks of Resource Extraction on Inland Environments: Oil and Gas Extraction and Coal Mining

| James Lazorchak, Sarah Hughes, David Soucek, Christopher Nietch, Bryan Brooks, Ben Kefford

**WP004** Mesocosm community response sensitivities to specific conductivity comprised of different major ions | *C. Nietch*

**WP005** Acute toxicity of bicarbonate from unconventional gas produced waters in eastern Australia | *B. Kefford*

**WP006** The Utica Shale Energy Environmental Laboratory (USEEL): An academia-industry-government partnership at Ohio State University | *R. Lanno*

**WP007** The Complexity and Challenges on Assessment of Toxicity of Hydraulic Fracturing Flowback Fluids | *Y. He*

**WP008** Induction of EROD activity and oxidative stress in gill of Rainbow Trout (*Oncorhynchus mykiss*) exposed to Hydraulic Fracturing Flowback Fluid | *E. Folkerts*

**WP009** The Application of a Weight-of-Evidence Aquatic Impact Assessment of a Coal Spill into a Freshwater Urban System | *G. Gilron*

### Munitions Compounds in the Environment: Release, Transport, Transformation, Exposure, Effects and Remediation

Robert George, Guilherme Lotufo

**WP010** A Practical Approach to Integrating Risk Assessment and Remediation at a former Munitions Manufacturing Facility - Using Results to Get Results | *S. Larew*

**WP011** Assessing the prevalence of non-additive toxicity among the chemical constituents of the insensitive munition formulation IMX-101 | *K. Gust*

**WP012** Bioaccumulation of the high energetic and insensitive munitions compound 2,4-dinitroanisole in the earthworm *Eisenia fetida* from spiked soils | *G. Lotufo*

**WP013** Investigation of polar organic chemical integrative sampler (POCIS) flow velocity dependence for munitions constituents in underwater environments | *R. George*

**WP014** Optimization of Integrative Passive Sampling Approaches for Munitions Constituents | *J. Belden*

**WP015** Phytoscreening for Energetic Contaminants: Perchlorate, RDX and HMX | *J. Burken*

**WP016** Potential risks and impact assessment of chemical warfare agents to human health and the environment at a deep-water discarded military munitions site | *C. Briggs*

**WP017** Shallow-water conventional munitions sites: A demonstrated approach for sampling and risk analysis | *S. Shjegstad*

**WP018** Tracking the metabolism of explosives in coastal marine ecosystems using stable isotopic tracers: Role of sediment | *T. Ariyaratna*

**WP019** Ultrasonic interrogation of underwater military munitions in marine environments | *R. George*

### Soil Contaminants: Fate, Bioavailability, Ecotoxicology and Risk Assessment

Michael Simini, Ming Fan, Theresa Phillips

**WP020** A Comparison of Total Suspended Solids Analytical Methodology | *M. Moland*

**WP021** Application of the weight of evidence (WOE) evaluation in a complex terrestrial ecological risk assessment | *S. Thakali*

**WP022** Arsenic Bioaccumulation in *Brassica juncea*: An Examination of Arsenic Availability and Toxicity in Soil with the Presence of Iron Oxyhydroxides | *B. Maki*

**WP023** Assessment of the Impacts of Bio-based Mineral fertilizers and substitute for Fossil-based synthetic fertilizers | *B. Ojong*

**WP024** Bioavailability and Bound-residue Formation of Perfluoroalkyl Substances in Soils | *L. Zhao*

**WP025** Ecotoxicity monitoring of plant-based biodiesel contaminated soil using the earthworm (*Eisenia fetida*) | *I. Bamgbose*

**WP026** Effect of Soil properties and fractionation of arsenic in soil on the bioavailability and toxicity of *Paronychius kimi* (Collembola) | *Y. Lee*

**WP027** Evaluating terrestrial toxicity of hydrophobic contaminants using plant and soil invertebrates | *J. Butler*

**WP028** Field validation of a laboratory pilot demonstrating the ability of biochar to reduce mercury bioavailability in floodplain soils | *B. Reese*

**WP029** Human health and ecological impacts from pipeline valve staining: Risk assessment coupled with research | *K. Bresee*

**WP030** Use of earthworms to identify atmospheric depots in soils of airborne metals in Toluca Valley | *J. Sánchez-Meza*

### Epigenetics for Environmental Toxicology

Ping Gong

**WP031** Environmental stressor-induced transgenerational epigenetic imprinting underlying sexual reproduction in *Daphnia pulex* | *P. Gong*

**WP032** Early-life stage exposure to triclosan in zebrafish affects genome-wide methylation at base-resolution | *E. Falisse*

**WP033** Acute cardiac effects of sublethal injection of benzo-a-pyrene and 5-azacytidine in juvenile rainbow trout (*Oncorhynchus mykiss*) | *F. Leal*

**WP034** The self-fertilizing mangrove rivulus, *Kryptolebias marmoratus*: a new model vertebrate species in ecological epigenetics and aquatic ecotoxicology | *F. Silvestre*

### Antibiotics in Agricultural Ecosystems: Fate, Treatment, Analysis and Ecological Effects

| Diana Aga, Joshua Wallace

**WP035** Fate of antimicrobials and antimicrobial resistance genes after land application of swine manure slurry | *S. Bartelt-Hunt*

### Antidepressants and Perfluorochemicals: Divergent Chemistries, Convergent Environmental Persistence and Effects

| Edward Furlong, Christopher Higgins, Heiko Schoenfuss

**WP036** Quantitation of Per- and Polyfluoroalkyl Substances on Consumer Products by LC-MS/MS, Total Oxidizable Precursor Assay & Confirmation by Total Fluorine | *A. Robel*

**WP037** From Chemistry to the Environment - A Prospective Analysis of the Research into Environmental Hazards of and Exposure to PFASs in the Next Decade | *Z. Wang*

**WP038** Locomotion, anxiety, and feeding behavior changes as a result of PFOS, PFNA and PFOA exposure to embryonic zebrafish (*Danio rerio*) | *C. Greenfield*

**WP039** The role of oatp transporters in the uptake of perfluorinated compounds into embryonic zebrafish (*Danio rerio*) | *K. Annunziato*

**WP040** Chronic exposure to fluoxetine (Prozac) and norfluoxetine affects the development of *Chironomus riparius* | *R. Webb*

**WP041** Age matters: Developmental stage influences behavioral response thresholds of *Danio rerio* larvae exposed to diphenhydramine or diazinon | *L. Kristofco*

### Biodegradation and Environmental Fate of Chemicals - Regulatory Acceptance of Non-Standard Tests

| Chris Mead

**WP042** Improving biodegradation of low solubility chemicals: What can we do? | *C. Mead*

**WP043** Investigation into the biodegradability of various hydrocarbon solvents | *D. Lyon*

**WP044** Proposed Modifications to the OECD 306 Seawater Biodegradation Screening Test | *T. Martin*

**WP045** Putting the bio" back into biodegradation: The Proposed Use of High Throughput Screening Methods in Chemical Biodegradation Assessment" | *T. Martin*

**WP046** Simulation studies to evaluate surfactant biodegradation rates and their degradation pathways in sewer systems: Application of the OECD 314A | *J. Menzies*

**WP047** Impact of sediment particle size on biotransformation of 17 $\beta$ -estradiol and 17 $\beta$ -trenbolone | *Y. Zhang*

**WP048** Measurement of hydroxyl radical rate constant for sulfur-containing polycyclic aromatic hydrocarbons | *P. Saranampour*

### Exploring the Intersection Between Ecosystem Ecology and Ecotoxicology: Recent Advances, Pitfalls and Recommendations

| Michelle Hornberger, Emma Rosi-Marshall

**WP049** Reassessing Duration and Frequency Components of Aquatic Life Criteria | *M. Elias*

**WP050** Environmental changes in the Baltic Sea affects fish health | *N. Hanson*

**WP051** Freshwater mussels alter mercury contamination of aquatic consumers | *B. Tweedy*

**WP052** Species Sensitivity Distributions (SSDs) for aquatic insects and metals inferred from recovery trajectories versus traditional laboratory approaches | *C. Mebane*

Track
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Aquatic Toxicology and Ecology

Integrated Env Assessment and Management

Environmental or Analytical Chemistry

Linking Science and Social Issues

# Wednesday Poster Presentations

## Contaminated Sediment Remediation: Assessing and Measuring Remedy Effectiveness | Marc Mills, Amy Mucha, David Walters

**WP053** Models for Remediation Effects in a Mercury Contaminated River | *J. Green*  
**WP054** Criteria for the Selection of Bank Management Areas as Part of the Mercury Remedy in a Complex River System | *J. Collins*  
**WP055** Establishing baseline data for short- and long-term monitoring to evaluate remedy effectiveness for a mercury contaminated sediment system | *J. Collins*  
**WP056** A review of amendments to reduce mercury availability in sediment | *K. Bechard*  
**WP057** Predicted effectiveness of activated carbon treatment for field sediment sites with variable site characteristics | *Y. Choi*  
**WP058** NCCOS Great Lakes Mussel Watch: Contamination Monitoring and Assessment for Restoration of the Great Lakes | *E. Johnson*

## Evolutionary and Multi-Generational Considerations in Ecotoxicology and Chemicals Risk Assessment | Karel A.C. De Schampelaere, Bryan Clark, Joe Shaw, Helen Poynton

**WP059** Acclimation and adaptation by multi-generational exposure to common marine pollutants in the marine copepod *Tigriopus californicus* | *P. Sun*  
**WP060** Accumulation, elimination, sequestration, and genetic variation of lead (Pb2+) loads within and between generations of *Drosophila melanogaster* | *E. Peterson*  
**WP061** Detailing the evolved resistance to PCBs and PAHs in Gulf killifish (*Fundulus grandis*) from Galveston Bay, Texas, USA | *E. Oziolor*  
**WP062** Effects of Multigenerational Exposure to Climate Change and Contaminants in *Daphnia magna* | *D. Kimberly*  
**WP063** Extent and evolutionary implications of insecticide resistance in a non-target amphipod, *Hyalella azteca* | *K. Major*  
**WP064** Genetic Variation Plays Important Role in Cadmium Stress Response: A QTL Mapping Approach in a *Daphnia* Controlled Cross | *S. Roy*  
**WP065** Quantifying evolutionary outcomes and their potential for risk assessment | *J. Shaw*

## Pesticide Dose and Exposure: Effects on the Environment, Target and Non-Target Organisms | Keith Solomon

**WP066** Passerine Dietary (LC50) Test: Challenges and Utility in Deriving an Acute Endpoint for Pesticide Registration in the U.S. | *M. Feken*  
**WP067** Effects of Environmentally-Relevant Mixtures of Four Common Organophosphorus Insecticides on the Honey Bee (*Apis mellifera* L.) | *Y. Alnagar*  
**WP068** Effects of a glyphosate end-use product on the flower phenology of black-eyed Susan (*Rudbeckia hirta*) and red clover (*Trifolium pratense*) | *S. Rodney*  
**WP069** Comparative Genotoxic analysis of non-target organism (*Archachatina marginata*) exposed to Paraquat and Glyphosate pesticides | *A. Udebuani*  
**WP070** Effects of glyphosate on interactions between Collembola and soil microorganisms | *J. Wee*  
**WP071** Neonicotinoid Insecticides: Assessing the Cumulative Toxicity of Mixtures on *Chironomus dilutus*, a Sensitive Aquatic Insect Species | *E. Maloney*  
**WP072** Effect of dietary exposure to field-realistic concentrations of imidacloprid on activity, metabolism, and cold tolerance of *Bombus impatiens* | *A. Krueger*  
**WP073** Chronic, comparative toxicity of imidacloprid, clothianidin, and thiamethoxam to aquatic macroinvertebrates in a laboratory and field setting | *M. Cavallaro*  
**WP074** Dermal Uptake of Organic Contaminants by Amphibians Based on Location of Exposure and Hydrophobicity of Contaminant | *W. Mimbs*  
**WP075** A Probabilistic Pesticide Risk Assessment Model for Predators of Vertebrates | *S. Rodney*  
**WP076** Estimating Risks to Aquatic Macroinvertebrate Communities after Exposure to Bifenthrin Contaminated Sediments | *H. Rogers*  
**WP077** Assessment of insecticide impacts on vineyards by using Environmental Impact Quotient (EIQ) Model | *S. Mermer*  
**WP078** The Impact of Underlying Assumptions on Avian and Mammalian Pesticide Risk Assessments | *C. Habig*  
**WP079** Developmental Neurotoxic Effects of Chlорpyrifos as observed through *C. elegans* Behavior | *K. Adams*  
**WP080** Considerations on practical methods to refine the risk assessment of pesticides on pollinators | *S. Knaebe*

## Advanced Nanomaterials Analysis for Nanotoxicology Studies

James Ranville, Sohely Tadjiki

**WP081** A metal fingerprinting approach to quantify single-walled carbon nanotube (SWCNT) in airborne particulate matter and marine sediment | *L. Ferguson*  
**WP082** Toxicity, intracellular accumulation and transport of uncoated and fluorescently conjugated TiO<sub>2</sub>-NPs in the intestinal fish cell line, RTgutGC | *M. Minghetti*  
**WP083** Using single particle ICP-MS as a tool for understanding metal-nanoparticles transformation during nanotoxicity assays | *M. Johnson*  
**WP084** Detecting Single-walled Carbon Nanotube uptake by *Daphnia magna* Using Single Particle ICP-MS | *J. Wang*

**WP085** Transformation kinetics of metallic nanoparticles in environmental and cell culture exposure media measured by SP-ICP-MS | *R. Merrifield*

**WP086** Evaluation of methods to quantify dissolution of metal nanomaterials | *N. Hartmann*

## Modeling Chemical Exposure

Todd Gouin, Matthew MacLeod

**WP088** The SETAC Exposure Modeling Advisory Group: Past, present, and the future (reinforcing the role of exposure science within SETAC) | *T. Gouin*

**WP089** Applying and evaluating the RAIDAR model to address data gaps for chemical exposure assessment: A case study for dechlorane plus | *A. Falls*

**WP090** Introducing BIONIC v2: A mechanistic mass balance model for predicting bioconcentration factors (BCFs) of ionizable organic chemicals in fish | *J. Armitage*

**WP091** Simulating the impact of Aboriginal Arctic traditional food substitution on nutrient and persistent organic pollutant intakes | *M. Binnington*

**WP093** Unifying data from chemistry, biology, and health fields of science within a single framework to improve human PBTK modeling | *T. Brown*

**WP094** Environmental fate and exposure modeling of home and personal care products in Asia: Ecohope | *C. Wannaz*

**WP095** Assessing the impact of adult physiological variability on the magnitude of chemical-chemical metabolic interactions | *M. Bteich*

**WP096** Modeling the Fate and Transport of Contaminants for Sediment Assessment and In-situ Remedial Design by using two novel tools CapSim and CapAn | *X. Shen*

**WP097** Predicted phototoxicities of carbon nano-material by quantum mechanical calculations | *D. Betowski*

**WP098** Development of *Helisoma Trivolvis* pond snails as biological passive samplers for the biomonitoring of current-use pesticides | *S. Morrison*

**WP099** Evaluation of dietary exposure using stable isotope measurements and dietary contribution analysis in the berry's creek study area (New Jersey, USA) | *K. Whitehead*

**WP100** Can we "see" signals of anthropogenic mercury emissions in the Great Lakes region? Effect of variability in emissions from coal combustion | *A. Giang*

## Systems Biology Approaches for Advancing Adverse Outcome Pathways for Risk Assessment | Cheryl Murphy, Natalia Vinas

**WP101** Systems Biology Approaches for Advancing Adverse Outcome Pathways for Risk Assessment | *N. Vinas*

**WP102** Weight of Evidence Evaluation of Adverse Outcome Pathways Converging at Impaired Vitellogenin Synthesis Leading to Reproductive Impairment | *K. Jensen*

**WP103** Exploring a Local Quantitative Structure-Activity Relationship (QSAR) Model developed from Mode-of-Action Data in an Adverse Outcome Pathway (AOP) | *M. Kawa*

**WP104** Development of Quantitative Adverse Outcome Pathways for Ecological Risk Assessment | *K. Watanabe*

## Sturgeon Ecotoxicology: Contaminant Risks to Endangered Populations

Markus Hecker, Donald Tillitt, Jonathon Doering

**WP105** Characterization of metallothionein in two ancient fishes exposed to metals: white sturgeon and lake sturgeon | *S. Beitel*

**WP106** Effects of chronic dietary exposure to selenomethionine on the transcriptome of juvenile white sturgeon (*Acipenser transmontanus*) | *S. Patterson*

**WP107** Relative potencies and relative sensitivities of dibenz-p-dioxins, dibenzofurans, and polychlorinated biphenyls in white sturgeon and lake sturgeon | *B. Eisner*

**WP108** Temporal Trends of PCBs, PBDEs, and Perfluorinated Compounds in Chinese Sturgeon (*Acipenser sinensis*) Eggs (1984-2008) | *J. Sun*

## Lab Data, Hazard, Risk and Regulation of Endocrine Active Chemicals - So What? The Big Picture from Little Pieces | Nancy Shappell, Tim Verslycke, Spencer Williams

**WP109** Challenges in ecotoxicology - what does controlled and standardized results mean in a complex and dynamic environment? | *T. Brodin*

**WP110** Estrogenic compounds, chemical quantitation, biological assessment - What we know, what we don't, and what should our future priorities be? | *N. Shappell*

**WP111** Evidence for thresholds associated with the weak estrogenic activity of 4-nonylphenol and 4-t-octylphenol | *K. Coady*

**WP112** Examining the disconnect between laboratory studies of endocrine active compounds and perceived ecological consequences | *H. Schoenfuss*

**WP114** Social hierarchy modulates endpoint expression in single-sex fish exposures to estrogens | *J. Ivanova*

## Advanced Analytical Methods for Contaminant Discovery | Eunha Hoh, Nathan Dodder, June-Soo Park

**WP115** Monitoring of 1300 organic micro-pollutants in surface waters from Tianjin and Jinan, Northern China | *L. Kong*

Regulatory Directions

Remediation/Restoration

Special Symposia

Terrestrial or Wildlife Toxicology and Ecology

Track

# Wednesday Poster Presentations

**WP116** Development of a multiresidue UPLC-MS/MS method for the analysis of 10 pesticides in water | *V. Toteu Djomte*  
**WP117** Biomonitoring of organic contaminants in marine mammals by GCxGC/TOF-MS | *N. Dodder*  
**WP118** Halogenated Carbazoles in Lake Trout from the Great Lakes of North America | *Y. Wu*  
**WP119** Non-target analysis by GC x GC-HRTOFMS and its application to emission source analysis of the detected contaminants using GIS | *Y. Zushi*  
**WP120** Fast screening of atmospheric particulate matter (PM) concentrations | *H. Hwang*

## Fate and Effects of Metals: Regulatory and Risk Assessment Perspective

Diana Eigner, Andrea Matzke

**WP121** A new approach to the hazard classification of massive-form metals | *P. Huntsman-Mapila*  
**WP122** Application of the Biotic Ligand Model for setting site-specific copper standards for Big Thompson River, CO | *J. Gondek*  
**WP123** Assessment of Amphibian Risks in Wetlands Containing Elevated Metal Concentrations | *R. Hull*  
**WP124** Development of a Draft National 304(a) Mercury Ambient Water Quality Criteria for the Protection of Aquatic Life and Aquatic-Dependent Wildlife | *A. Jarvis*  
**WP125** Draft Reassessment of the 1988 Ambient Water Quality Criteria for Aluminum | *D. Eigner*  
**WP126** Effects of seawater introduction on trace element levels in aquatic ecosystem of Lake Koyama-ike, Japan | *M. Hosoda*  
**WP127** Fluctuating water levels in coastal wetlands: The role of hydroperiod on release and capture of bioavailable metals | *S. Nedrich*  
**WP128** Revising USEPA's National Cadmium Ambient Water Quality Criteria for the Protection of Freshwater and Estuarine/Marine Aquatic Life | *M. Elias*  
**WP129** Risk Assessment of Agricultural farmland: A case study of Wukari, Taraba State Nigeria | *O. Otituju*  
**WP130** Risk Assessment of Mercury Contamination To Human Health in The Vicinity of Small-Scale Gold Mining Activities | *K. Oginawati*  
**WP131** The Biotic Ligand Model as a Predictor of Acute Copper and Zinc Toxicity to Ceriodaphnia dubia in a Blackwater Receiving Stream in South Carolina | *S. Harmon*

## Defining the Role of Chemical Activity in Environmental Risk Assessment

Todd Gouin, James Armitage

**WP132** Why is chemical activity successful as a metric of aquatic toxicity? A gedankenexperiment explains why | *J. Armitage*  
**WP133** Challenges and potential limitations to the application of the chemical activity concept for environmental risk assessment | *T. Gouin*  
**WP134** Defining the relationship between chemical activity and specific modes of action | *J. Hermens*  
**WP135** Linking algal growth inhibition to chemical activity | *S. Schmidt*  
**WP136** Addressing uncertainty in sub-cooled liquid property estimation: Applications for chemical activity calculations | *T. Brown*  
**WP137** Estimating chemical solubility and its uncertainty for toxicology and environmental risk assessment using Bayesian method | *T. Gouin*  
**WP138** Applying the RAIDAR model and the chemical activity approach for ecological risk assessment: A case study for select organic flame retardants | *J. Arnot*  
**WP139** Sorptive capacities of lipids determined by passive dosing of non-polar organic chemicals | *A. Jahnke*

## EDCs and Pharmaceuticals in the Environment

Marc Mills, James Lazorchak, Kyle Fetter, Ruth Marfil-Vega

**WP140** Faster greener techniques for analysis of common pharmaceuticals in wastewater | *C. Bottaro*  
**WP141** Estrogens in estuarine water: analytical validation and first data for a highly populated coastal Brazilian region | *R. Gonçalves*  
**WP142** Occurrence of Wastewater Contaminants at Norway House Cree Nation, Manitoba, Canada | *K. Luong*  
**WP143** EDC activity in hospital, WWTP effluent, and river waters from the Brussels region, Belgium | *K. Van Langenhove*  
**WP144** Bio-chemical evaluation of endocrine and hormone disrupting activities in river waters from Vietnam and India | *T. Nguyen*  
**WP145** Screening treated wastewater for pharmaceutical emerging contaminants under high temperature and saline conditions | *D. Nabi*  
**WP146** Plants cell cultures: A Tool for Screening Plant Metabolic Potential of Contaminants of Emerging Concern (CECS) | *S. Dudley*  
**WP147** Uptake of endocrine disrupting organic pollutants from sewage sludge by earthworms *Dendrobaena veneta* | *I. Havranek*  
**WP148** Dissolved Organic Matter Mediated Photolysis of 17 $\alpha$ -Ethyneestradiol | *M. Freiberger*

## Recent Advances in Endocrine Disruptor Screening – Applications for Ecotoxicology

Katherine Coady, Patience Browne

**WP149** The endocrine-disrupting potentials of equine metabolites in the medaka using *in silico* and *in vivo* assays | *K. Arizona*

**WP150** Investigations of endocrine disruption using *Gambusia* species | *M. Gagnon*

## Regional Marine Monitoring Programs around the US

**WP151** The Regional Monitoring Program for Water Quality in San Francisco Bay, California, USA: Science in Support of Managing Water Quality | *P. Trowbridge*

**WP152** The San Diego Regional Harbor Monitoring Program in Southern California, USA | *C. Stransky*

## Canadian Oil Sands: Advancing Science for an Expanding Industry

Richard Frank, Jonathan Martin

**WP153** Recent Trends in Ambient Air VOC and RSC Concentrations in the Athabasca Oil Sands Region | *K. Percy*

**WP154** Toxicity Mapping using Passive Air Sampling for Polycyclic Aromatic Compounds | *N. Jariyasopit*

**WP155** Polycyclic Aromatic Compounds in Tributaries of the Athabasca River in the Oil Sands Region of Alberta, Canada | *C. Manzano*

**WP156** Oil sands influences on PAC concentrations, composition and diagnostic ratios in sediments in the oil sands monitoring area and western Lake Athabasca | *M. Evans*

**WP157** Lead isotopes as a potential fingerprinting tool in the Athabasca Oil Sands Region | *P. Gammon*

**WP158** Gene expression of drug metabolizing enzymes and ABC transporters in larvae of Japanese medaka exposed to acidic basic and neutral fractions of OSPW | *H. Alharbi*

**WP159** Preparative fractionation of bitumen-influenced groundwaters from the Athabasca oil sands region for toxicological evaluations | *R. Frank*

**WP160** Toxicity of naphthenic acid fraction components extracted from oil sands process-affected waters to fathead minnow and walleye early-life stages | *J. Parrott*

**WP161** Olfactory and behavioural responses in fish exposed to natural and anthropogenic oil sands related toxicants in the lower Athabasca River basin | *S. Chow*

**WP162** Determining the effect of oil sands process-affected water on grazing behaviour of *Daphnia magna* | *E. Lari*

**WP163** Toxicogenomic effects of diluted bitumen on developing fathead minnow (*Pimephales promelas*) | *F. Alsaadi*

**WP164** A comparison of conventional crude oil and dilbit developmental toxicity to zebrafish | *D. Philibert*

**WP165** A mechanistic investigation of the influence of water chemistry on vanadium toxicity to *Daphnia* sp. | *E. Gillio Meina*

**WP166** Assessing the toxicity of natural Oil Sands area sediments using juvenile freshwater mussels | *P. Gillis*

**WP167** Assessing sediments for "lake making" by determining the pore water concentration and potential bio-available fraction of organic contaminants | *A. Wijdeveld*

## Airborne Particulate Matter Toxicity: Key Players and Modes of Action

Martin Shafer

**WP168** Contrasting Water-Soluble Dithiothreitol (DTT) and Ascorbic Acid (AA) Activities: Spatiotemporal Trends, Source Apportionment, and Health Impacts | *T. Fang*

**WP169** Oxidative Potential of Ambient Particulate Matter in Southeastern United States and the Generation of Reactive Oxygen Species | *V. Verma*

**WP170** A Murine Model of Allergic Inflammation and Immune Sensitization on Exposure to Ambient Ultrafine Particulate Matter and Engineered Nanoparticles | *M. Williams*

**WP171** Predicting species-specific exposures to ambient particulate matter in indoor air | *N. Hodas*

**WP172** Physicochemical Composition of Ambient Respirable Dust in the Urban Setting: the Case of Kitwe City | *P. Mwaanga*

## Sources, Concentrations, Fate and Effects of Organophosphate Flame Retardants and Plasticizers

Liisa Jantunen, Miriam Diamond

**WP173** Organophosphate ester concentrations in Toronto tributaries, rain water, and waste water treatment plants | *J. Truong*

**WP174** Concentrations and Trends of Organophosphate Esters in the Great Lakes Atmosphere | *A. Peverly*

**WP175** Organophosphate flame retardants in the Canadian Arctic | *L. Jantunen*

**WP176** Assessment of Spatial and Temporal Distribution of Current-Use Organophosphate Esters in Houston, Texas | *A. Clark*

**WP177** Organophosphorus Flame Retardants in influent, effluent and biosolids in Canadian Wastewater Treatment Plants | *A. De Silva*

Track
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Aquatic Toxicology and Ecology

Integrated Env Assessment and Management

Environmental or Analytical Chemistry

Linking Science and Social Issues

# Wednesday Poster Presentations

**WP178** From clothing to laundry water: Investigating the fate of chemicals of concern sorbed to fabrics | *M. Diamond*

**WP179** Baby Product Ownership and Infant's Exposure to Tris(1,3-dichloro-2-propyl)phosphate (TDCIPP) | *H. Stapleton*

## Aquatic Toxicology and Ecology General - Part 3

Scott Belanger

**WP180** A Refined Multi-Site Model to Estimate the Toxicity of PAH-Contaminated Sediments at MGP Sites | *M. Kierski*

**WP181** Acute and chronic toxicity of select neonicotinoids to aquatic invertebrates | *M. Raby*

**WP182** An Effect Evaluation of Herbicides on Aquatic Communities | *R. Connon*

**WP183** Antibiotics and Antibiotic Resistance in Minnesota Surface Waters | *M. Andreone*

**WP184** Approaches for Assessing Ecological Hazard of Perfluorinated Chemicals in the USEPA TSCA New Chemicals Program | *J. Gallagher*

**WP185** Assessing the Effects of Sediment Aging During Chronic Hydrophobic Organic Compound Toxicity Tests Using *L. variegatus* | *J. Butler*

**WP186** Assessment of the toxicity and bioaccumulation of sediment-derived substituted phenylamine antioxidants in freshwater invertebrates | *P. Gillis*

**WP187** Bioturbation and Behavior of *Lepidophthalmus louisianensis* in Response to the Presence of Crude Oil | *A. Kascak*

**WP188** Chironomus riparius: A tool for studying the ecological effects of inert "safernes" | *K. Bolyard*

**WP189** Comparative Evaluation of the Efficacy of *Leptocheirus pluvialis* Acute and Chronic Sublethal Test | *D. Farrar*

**WP190** Comparative responses of freshwater organisms to commercial naphthenic acid exposures | *C. Kinley*

**WP191** Comparing experimental designs and statistical analyses to estimate critical thresholds in Ecotoxicology | *M. Krull*

**WP192** Comprehensive review of ecological injury from legacy contaminants for Natural Resource Damage Assessments: Polychlorinated biphenyl (PCB) case study | *J. Berninger*

**WP193** Dioxin-like activity in hornyhead turbot diet-derived exposed to polluted sediments from Palo Verdes by bioassay: contribution of DDT metabolites | *G. Xu*

**WP194** Effect of herbicide surfactant, polyethoxylated tallowamine, on oviposition and viability of eggs of rams-horn snail, *Planorbella pilosbryi* | *R. Prosser*

**WP195** Effect of narcotics on membrane-bound mitochondrial processes in fish | *L. Vergauwen*

**WP196** Estimation of Site-specific PAH Leaching from Creosote Treated Piles in the Aquatic Environment | *A. Blanc*

**WP197** Evaluating the toxicity of perfluoroalkyl sulfonates (PFASs) to a sensitive invertebrate, the mosquito *Aedes aegypti* | *A. Olson*

**WP198** Fluoranthene and Ultra Violet light DNA damage and repair in *Artemia franciscana* | *M. del Carmen Guzman Martinez*

**WP199** Growth and physiological effects in *Ankistrodesmus falcatus* and *Microcystis aeruginosa* exposed to 2,4-D | *E. Martinez Ruiz*

**WP200** Investigating the potential effects of pollutants on the gastrointestinal microbiome of rainbow trout (*Oncorhynchus mykiss*) | *A. Moate*

**WP201** Neurotoxic and behavioral effects of carbaryl and glyphosate pesticides on killifish (*Fundulus heteroclitus*) | *A. Everett*

**WP202** Relationships Between Sediment Toxicity and Contaminant Concentrations in Newtown Creek Superfund Site | *J. Cura*

**WP203** The Effect of Bifenthrin Exposure Related to the Dopaminergic Pathway in Embryos of Zebrafish (*Danio Rerio*) | *L. Becker Bertotto*

**WP204** The interplay between biota and pollutants: ghost shrimp affect environmental conditions and aromatic hydrocarbon distribution in laboratory mesocosms | *P. Klerks*

**WP205** Thyroid hormone disrupting effects of water-accommodated fractions (WAFs) of oil-implication of oil pollution | *D. Jung*

**WP206** Toxicity of anticoagulant rodenticides in two freshwater fishes to aid test design for Hawaiian triggerfish | *R. Riegerix*

**WP207** Toxicity of polychlorinated biphenyls and N-phenyl-1-naphthylamine in juvenile turtle *Chelydra serpentina* | *T. Colson*

## Integrated Environmental Assessment and Management General - Part 2

Tim Canfield, Christopher McCarthy

**WP208** Air-water Exchange of PAH and OPAH Upstream, Within and Downstream of a Mega-Superfund Site | *L. Tidwell*

**WP209** Quantitation of ractopamine in particulate matter emitted from beef cattle feedyards | *K. Wooten*

**WP210** Higher-tier surface water exposure modeling approach of veterinary pharmaceuticals administered to beef cattle | *I. Khanijo*

**WP211** Establishing a Baseline for Remedial Action in Newtown Creek: Comparing a Superfund Site with Regional Background and New York City CSO Discharges | *E. Garvey*

**WP212** Integration of Ecological Risk and treatability Testing in the Development of a Sediment Remedy | *T. Sorell*

**WP213** A Comparison of Predicted vs. Actual Near Field Sediment Concentrations in the Lower Willamette | *B. DeShields*

**WP214** Using generic population models to evaluate the potential for adverse effects in endangered species risk assessment: a case study approach | *K. Kapo*

**WP215** Microcosm Study: Statistical Power Plays a Role in Detecting Treatment-Related Population Effects | *K. Lamichhane*

**WP216** Best practices for setting ADEs for pharmaceutical risk assessment and data-derived approaches for moving away from defaults | *A. Willis*

**WP217** Green-washing: What Is a Meaningful Ecolabel? | *N. Maples-Reynolds*

**WP218** Decision Making Framework for Beneficial Reuse of Produced Water | *M. Pattanayek*

**WP219** A hypothesis-driven weight of evidence analysis evaluating endocrine disrupting potential: Triclosan case study | *E. Mihaich*

**WP220** Is Triclosan Endocrine Active in a Larval Amphibian Growth and Development Assay (LAGDA)? | *S. Pawlowski*

**WP221** Spatial technologies to place veterinary medicine aquatic exposure concentrations into risk context | *J. Amos*

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## NOTES

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# SETAC ORLANDO

6-10 NOVEMBER 2016  
ORLANDO, FL, USA

7<sup>th</sup> SETAC World Congress/  
SETAC North America  
37<sup>th</sup> Annual Meeting

*"Fostering Environmental Science  
for an Ever-Changing World"*



[orlando.setac.org](http://orlando.setac.org)

# Thursday 5 November

## General Opening Hours

TIME	AREA	LOCATION
7:00 a.m.–3:00 p.m.	Registration	East Registration
8:00 a.m.–5:35 p.m.	Poster Viewing and SETAC Store	Exhibit Hall

## Daily Schedule

TIME	EVENT	LOCATION
7:00 a.m.–8:00 a.m.	Poster Setup	Exhibit Hall
8:00 a.m.–9:15 a.m.	Morning Platform Sessions	See session listing
9:15 a.m.–10:00 a.m.	Coffee Break	Exhibit Hall
10:00 a.m.–11:15 a.m.	Morning Platform Sessions cont'd	See session listing
11:15 a.m.–1:00 p.m.	Lunch Break	
1:00 p.m.–2:15 p.m.	Afternoon Platform Sessions	See session listing
2:15 p.m.–3:00 p.m.	Coffee Break	Exhibit Hall
3:00 p.m.–4:15 p.m.	Afternoon Platform Sessions cont'd	See session listing
4:15 p.m.–5:35 p.m.	Poster Social	Exhibit Hall
5:45 p.m.–6:30 p.m.	<b>Closing Ceremony</b>	Ballroom AC

## Business Meetings

TIME	MEETING	LOCATION
8:00 a.m.–2:00 p.m.	Global Horizon Scanning Workshop	150 G
11:00 a.m.–1:00 p.m.	2015/2016 Program Committee Luncheon	251 C
3:30 p.m.–4:30 p.m.	API Biomonitoring Task Force	250 CF



## Closing Ceremony

5:45 p.m.–6:30 p.m. | Ballroom AC

Join us for the grand finale of the meeting! We will feature highlights from the technical and social program, and preview the exciting events in store for SETAC in 2016, such as the 7<sup>th</sup> SETAC World Congress/SETAC North America 37<sup>th</sup> Annual Meeting in Orlando, Florida. Everybody attending will have a chance to win a Hobie kayak or a bike from Salem Cycle.\*

THANK YOU TO OUR CLOSING CEREMONY SPONSORS:



**Erin R. Bennett**



\*Must be present to win. SETAC will cover the cost to ship the kayak and bike within the continental US and Canada.

# Thursday Morning Platform Presentations

	8:00-8:15	8:20-8:35	8:40-8:55	9:00-9:15
250 AB	<b>Moving Beyond Model Organisms - Next Generation Species Extrapolation</b>   Carlie LaLone, Lina Kearney			
250 DE	567 Use of the Adverse Outcome Pathway Framework to Represent Cross-species Consequences of Specific Pathway Perturbations   <i>D. Villeneuve</i>	568 Species extrapolation between humans and fish: a two-way street   <i>L. Margiotta-Casaluci</i>	569 Leveraging a large scale mammalian pharmacological dataset to prioritize potential environmental hazard of pharmaceuticals   <i>J. Berninger</i>	570 Differences in species sensitivity towards the psychiatric drug oxazepam   <i>J. Fick</i>
251 AB	<b>Advances in Environmental Metabolomics</b>   Drew Ekman, Jonathan Benskin	575 An in vivo metabolomic study for developmental neurotoxicity of pesticides, combining cognitive and motor function effects with metabolomic pathways   <i>S. Huang</i>	576 An in vivo metabolomic study for developmental neurotoxicity of pesticides, combining cognitive and motor function effects with metabolomic pathways   <i>P. Leonards</i>	577 Applying high resolution mass spectrometry and network analysis to assess effects of a novel androgen, spironolactone, on metabolic pathways in fish   <i>J. Davis</i>
Ballroom AC	<b>Reverse Toxicokinetics in Aquatic Organisms</b>   Scott Lynn, Irvin Schultz, Edward Perkins	583 Applying PBTK and Compartmental Models for Reverse Toxicokinetics: Interspecies Differences and Environmental Influences   <i>I. Schultz</i>	584 Reverse toxicokinetic models of fathead minnow ( <i>Pimephales promelas</i> ) and zebrafish ( <i>Danio rerio</i> ) for in vitro to in vivo extrapolation   <i>M. Mayo</i>	585 Toxicokinetic modeling of contaminants in marine mammals: why reverse dosimetry is often inevitable   <i>L. Weis</i>
Ballroom B	<b>Ecotoxicity Technical Advisory Panel: Honoring 20 Years of Scientific Contributions to Metals Risk Assessment</b>   Chairs: ----->	590 Ecotoxicity Technical Advisory Panel - Purpose and Development   <i>E. Doward-King</i>	591 Scientific advances in aquatic metal ecotoxicology   <i>R. Blust</i>	592 Scientific advances in sediment metal ecotoxicology   <i>G. Burton</i>
Ballroom D	<b>Current and Emerging Tools and Approaches for Ecosystem-Focused Chemical Assessments Involving Data Gaps</b>   Anne Doherty, Kelly Moran, Timothy Malloy	598 Consumer Product Chemical Ingredient Assessment Eco-Gap": Regrettable Examples and Improvement Opportunities"   <i>K. Moran</i>	599 Managing Uncertainty in Regulatory Alternatives Analysis   <i>T. Malloy</i>	600 ECOSAR Version 2.0. Update and Redesign of USEPA Office of Pollution Prevention and Toxics Aquatic Toxicity Expert System   <i>J. Tunkel</i>
Ballroom E	<b>The Continuing Evolution of Sediment Toxicity Methods and Data Interpretation</b>   Christian Picard, Chris Ingwersoll, Curtis Eickhoff	605 Refining methods for conducting long-term sediment and water toxicity tests with Chironomus dilutus: Formation of a Midge Chronic Testing Work Group   <i>C. Ingwersoll</i>	606 Evaluating the relative sensitivity of endpoints generated during midge life-cycle sediment toxicity tests   <i>T. Valenti</i>	607 Age-related sensitivity of three common sediment assay organisms exposed to a representative pyrethroid insecticide   <i>M. Bradley</i>
Ballroom F	<b>Modeling Chemical Exposure - Part 2</b>   Todd Gouin, Matthew MacLeod	613 Modeling chemical fate and transport in the air-skin system to understand human exposure potential   <i>E. Webster</i>	614 Exposure to chemicals in consumer products: A parsimonious model for chemicals encapsulated in products   <i>L. Huang</i>	615 Exploring Chemical Exposure via Food Imports: The Hazards of a Globalized Diet   <i>C. Ng</i>
Ballroom G	<b>Bioaccumulation in Management and Regulation</b>   Doris E. Vidal-Dorsch, Frank Gobas	621 A Bioenergetic Bioaccumulation Model for Persistent Organic Pollutants in Aquatic and Terrestrial Food Webs   <i>Y. Fan</i>	622 Assessing dioxin/furan bioaccumulation from historically contaminated sediments using a novel modification of the bedded sediment bioaccumulation test   <i>M. Sanborn</i>	623 Gastro-intestinal and Somatic Biotransformation in Fish: Implications on BCF and BMF Measurements and Regulatory Interpretation   <i>J. Lo</i>
Ballroom H	<b>Molecular, Individual and Population Effects of Contaminants in Herpetofauna and Incorporation Into Risk Assessment</b>   Scott Weir, Stacey Lance	629 Development of a standardized toxicity test method for Northern Leopard Frog ( <i>Lithobates pipiens</i> ) in Canada   <i>L. Van der Vliet</i>	630 Development of an Acute Oral Gavage Method for the Evaluation of Pesticide Toxicity in Terrestrial Amphibians   <i>D. Fort</i>	631 Toxicity of Pyraclostrobin Fungicides to Terrestrial Amphibians   <i>P. Cusaac</i>
Ballroom I	<b>Environmental Risk Assessment of Veterinary Pharmaceuticals</b>   Christopher Holmes, Holly Zahner, Eric Silberhorn	637 New developments in the environmental risk assessment of veterinary medicinal products in the EU   <i>S. Hickmann</i>	638 Benign by design' testing of chemicals by means of simple STP/ UW modeling   <i>D. van de Meent</i>	639 Estimation of veterinary drug concentrations in Canadian soils: Do the PECs MEC Sense?   <i>S. Kullik</i>
Ballroom J	<b>Sustainability Metrics: LCA and Beyond</b>   David Meyer, Annie Weisbrod, Susan Csiszar	645 LCA: leading to a decrease in the use of natural resources   <i>W. Motta</i>	646 Beyond GDP - national accounting in the age of resource depletion   <i>M. Carbajales-Dale</i>	647 LCA and its application on the path to circular economy   <i>W. Motta</i>
Track	<b>Aquatic Toxicology and Ecology</b>	<b>Integrated Env Assessment and Management</b>	<b>Environmental or Analytical Chemistry</b>	<b>Linking Science and Social Issues</b>

# Thursday Morning Platform Presentations

10:00-10:15		10:20-10:35		10:40-10:55		11:00-11:15			
<b>Moving Beyond Model Organisms – Next Generation Species Extrapolation</b>   Carlie LaLone, Lina Kearney									
571 Cross-species Extrapolation of Mammalian-Based ToxCast Data using Sequence Alignment to Predict Across Species Susceptibility (SeqAPASS)   <i>C. LaLone</i>		572 Development of fully-automated pipelines for the identification of protein targets and susceptible wildlife species   <i>O. Price</i>		573 Conservation of biological pathways across non-animal models drives chemical effects   <i>M. Wilbanks</i>		574 Exploiting genomics to predict environmental risk of pharmaceuticals   <i>L. Kearney</i>			
<b>Advances in Environmental Metabolomics</b>   Drew Ekman, Jonathan Benskin									
579 Effects of drilling muds on the deep-water sponge <i>Geodia baretti</i> studied by metabolomics and metagenomics   <i>T. Størseth</i>		580 Targeted metabolomics fingerprint responses in teleosts exposed to contaminants in the lab and the field   <i>B. Chandramouli</i>		581 Using 1H NMR-based metabolomics to analyze <i>Daphnia magna</i> responses after sub-lethal exposure to triclosan, carbamazepine and ibuprofen   <i>V. Kovacevic</i>		582 Using 1H NMR-based Metabolomics to Detect Biochemical Changes in <i>Daphnia magna</i> in Response to Sub-Lethal Malathion, Diazinon and Bisphenol A Exposures   <i>E. Nagato</i>		250 AB	
<b>Reverse Toxicokinetics in Aquatic Organisms</b>   Scott Lynn, Irvin Schultz, Edward Perkins									
587 PBTK Modeling Helps Prediction of Fish Growth From Cell Line Experiments   <i>A. Zupanic</i>		588 Development of screening level hazard thresholds using in vitro to in vivo extrapolation of zebrafish embryo transcriptional points of departure   <i>E. Perkins</i>		589 Incorporating Modeling and Visualization Tools to Assess Environmental Exposures and Fish Toxicokinetics following Deepwater Horizon Spill   <i>C. Strope</i>		Discussion			
<b>&lt;---- Title</b>   G. Allen Burton, Andrew Green, Christian Schlekat, Eric Van Genderen									
594 The role of chemical speciation in the risk assessment of metals   <i>P. Campbell</i>		595 Evolution of Bioavailability-Based Risk Assessment: How Was It Done and Why Was It Successful?   <i>D. Di Toro</i>		596 Ecotox Technical Advisory Panel (ETAP) Impact of Twenty Years of Research on Chemical Management Frameworks   <i>W. Adams</i>		597 Future challenges in metals risk assessment: Building upon the current state of the science   <i>E. Garman</i>			
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<b>Current and Emerging Tools and Approaches for Ecosystem-Focused Chemical Assessments Involving Data Gaps</b>   Anne Doherty, Kelly Moran, Timothy Malloy									
602 Screening Assessment of Relative Hazard to Fish from Emerging Contaminants in the Great Lakes Basin   <i>D. Gefell</i>		603 Filling ecotoxicity data gaps to define safer chemicals: USEPA Safer Choice/DFE Experience   <i>E. Lavoie</i>		604 Life Cycle Management and Toxicity Assessment: Apples and Oranges; or Two Sides of the Same Coin?   <i>L. Heine</i>		Discussion			
<b>The Continuing Evolution of Sediment Toxicity Methods and Data Interpretation</b>   Christian Picard, Chris Ingersoll, Curtis Eickhoff									
609 Improving survival and reproduction in the 28-day Marine Amphipod ( <i>Leptocheirus plumulosus</i> ) Sediment Test   <i>H. Krueger</i>		610 Draft ASTM International standard for conducting laboratory sediment toxicity test with juvenile freshwater mussels   <i>J. Besser</i>		611 Effect-directed analysis of sediment-bound contaminants: Application of passive dosing to incorporate bioavailability into in vivo toxicity testing   <i>J. You</i>		612 Using Spiked Bioassays to Address Chemicals Without Sediment Benchmarks: Example Case Study – Barium in Freshwater Sediments   <i>J. Hedgecock</i>			
<b>Modeling Chemical Exposure – Part 2</b>   Todd Gouin, Matthew MacLeod									
617 Long-range oceanic transport of perfluoroalkyl acids to the Arctic and their temporal trends   <i>X. Zhang</i>		618 Temporal trends in air-sea exchange of polychlorinated biphenyls (PCB) and implications for the Arctic   <i>H. Amos</i>		619 The Development of a Bioaccumulation Model of Los Angeles and Long Beach Harbor for Evaluation of TMDL Compliance   <i>E. Lamoureux</i>		620 Modeling Rate-Limited Mass Transfer at Contaminated Sediment Sites   <i>P. Israelsson</i>			
<b>Bioaccumulation in Management and Regulation</b>   Doris E. Vidal-Dorsch, Frank Gobas									
626 Technical and Decision-Making Implications of Biomagnification-Based Water Quality Criteria for Mercury   <i>U. Vedagiri</i>		627 Temporal Data Provide Evidence of Natural Recovery and Confirmation of Portland Harbor Bioaccumulation Model Projections   <i>J. Toll</i>		628 The Effects of Fish Consumption and Bioaccumulation Rates on Relative Source Contribution and Human Health Water Quality Criteria   <i>D. Essig</i>		625 Mercury Discharge into the Ohio River in an Evolving Regulatory Environment   <i>C. Tuitt</i>			
<b>Molecular, Individual and Population Effects of Contaminants in Herpetofauna and Incorporation Into Risk Assessment</b>   Scott Weir, Stacey Lance									
633 In search of physiological and behavioral patterns in snakes during chemical exposure   <i>L. Neuman-Lee</i>		634 How coal combustion waste influences phenotypic variation of an amphibian through genetic and maternal effects   <i>R. Flynn</i>		635 Understanding the population-level consequences of copper toxicity and climate variability on amphibians inhabiting contaminated environments   <i>S. Weir</i>		636 Using mercury concentration, age class and DNA methylation for population health modeling in the American alligator ( <i>Alligator mississippiensis</i> )   <i>F. Nilsen</i>			
<b>Environmental Risk Assessment of Veterinary Pharmaceuticals</b>   Christopher Holmes, Holly Zahner, Eric Silberhorn									
641 Environmental fate of trenbolone acetate metabolites: Recent progress and remaining challenges posed by bioactive transformation products   <i>D. Cwiertny</i>		642 Approach to the Environmental Risk Assessment for a Cattle Implant Containing Estradiol and Trenbolone   <i>E. Silberhorn</i>		643 Expanding our knowledge of exposure as part of the Environmental Assessment for a veterinary medicine   <i>C. Holmes</i>		644 Analysis of Environmental Effects and Potential Risks due to a Cattle Implant Containing Estradiol and Trenbolone   <i>H. Zahner</i>			
<b>Sustainability Metrics: LCA and Beyond</b>   David Meyer, Annie Weisbrod, Susan Csiszar									
649 Life-Cycle Case Study Comparison of Various Remediation Technologies at the Geneva Industries Superfund Site   <i>C. Zhang</i>		650 Modeling Approaches to Explore Food System Regionalization as a Sustainability Strategy   <i>N. Tichenor</i>		651 Customer Impact Product Profile: a platform for product sustainability assessment   <i>X. Yang</i>		652 Dynamic LCA model for air quality impacts in a regional energy conservation district   <i>W. Collinge</i>			
<b>Targeted and Non-Targeted High-Resolution Mass Spectrometry investigations in Environmental Media</b>   Mark Strynar, Lee Ferguson, Christopher Higgins									
657 Sensitive Screening of Pharmaceuticals and Personal Care Products (PPCPs) in Water Using Agilent 6545 LC/Q-TOF High Resolution Mass Spectrometer   <i>C. Marvin</i>		658 Comprehensive analytical method for polar-organic compounds in water samples by liquid chromatography time-of-flight mass spectrometry   <i>H. Chau</i>		659 Identification of novel per- and polyfluorinated compounds in AFFF-impacted groundwater   <i>S. Roberts</i>		Discussion			
<b>Regulatory Directions</b>		<b>Remediation/Restoration</b>		<b>Special Symposia</b>		<b>Terrestrial or Wildlife Toxicology and Ecology</b>			
Track		Ballroom J		Ballroom I		Ballroom H		Ballroom G	
Ballroom F		Ballroom E		Ballroom D		Ballroom C		Ballroom B	
Ballroom G		Ballroom F		Ballroom E		Ballroom D		Ballroom C	
Ballroom H		Ballroom I		Ballroom J		Ballroom K		Ballroom L	
Ballroom I		Ballroom J		Ballroom K		Ballroom L		Ballroom M	

 Presentation will not be recorded.

# Thursday Afternoon Platform Presentations

	1:00-1:15	1:20-1:35	1:40-1:55	2:00-2:15
250 AB	<b>Biases and Conflicts of Interest in Ecotoxicology: Perspectives From Academia, Government and Industry</b>   Christine Lehman			
250 DE	<b>Assessing the Potential for Multi-Ion Toxicity</b>   Paul Paquin, Kevin Brix, Charles Delos, Rasa Bubnyte	<b>661 White Hat Bias in the Environmental Sciences</b>   A. LeHuray	<b>662 Exploration of how scholarship in developing novel techniques can potentially mitigate bias and conflict of interest in academia</b>   C. Murphy	<b>663 Inherent bias in the terminology, guidance and methods used in environmental toxicology and risk assessment</b>   W. Landis
251 AB	<b>Environmental Fate, Transport and Modeling of Agricultural Chemicals</b>   Scott Jackson	<b>668 Relationship between ecoregional background specific conductivity and salt-intolerant genera</b>   S. Cormier	<b>669 Expressing total dissolved solids toxicity as conductivity or individual ions?</b>   W. Goodfellow	<b>670 Interactive toxicity of major ion salts: Comparisons among species and between acute and chronic endpoints</b>   D. Mount
Ballroom AC	<b>Improving the Usability of Ecotoxicology in Regulatory Decision-Making</b>   Jane Staveley, Marlene Agerstrand	<b>676 USEPA Office of Pesticide Programs (OPP) Aquatic Exposure Assessment: Overview of Current &amp; Future Practices</b>   M. Corbin	<b>677 Tillage impact on herbicide loss by surface runoff and lateral subsurface flow</b>   T. Potter	<b>678 Influence of temperature, relative humidity, and soil properties on pesticide soil-air partitioning: Laboratory measurements and predictive models</b>   K. Hageman
Ballroom B	<b>Solution-Focused Risk Assessment</b>   John Toll, Marc Greenberg	<b>684 Improving the usability of ecotoxicology in regulatory decision-making: initial findings from a SETAC Pellston Workshop</b>   J. Staveley	<b>685 All the science that's fit to print!</b>   M. Hanson	<b>686 Reliability criteria for evaluating studies: Improving evaluation of ecotoxicity studies – Report from WG2</b>   K. Solomon
Ballroom D	<b>"-Omic" Technologies and Their Real-World Applications</b>   Adam Biales, Doris E. Vidal-Dorsch	<b>691 Evaluating management actions as part of a quantitative ecological and human health risk assessment</b>   M. Harris	<b>692 Getting more bang for your buck in ecological field programs to support risk assessment and natural resource damages assessment</b>   H. Summers	<b>693 Improving Oregon's Ecological Risk Assessment Framework</b>   J. Toll
Ballroom E	<b>Environmental mixtures of chemicals: Aquatic exposure-based approaches for simplification and implementation</b>   Christopher Holmes, Derek Muir, Scott Dyer	<b>698 A novel "Integrated Biomarker Proteomic" index to assess the effects of freshwater pollutants in endangered species</b>   F. Silvestre	<b>699 Adverse Outcome Pathways underlying narcosis toxicity and the use of -omics technologies for screening potential narcotic chemicals</b>   E. Brockmeier	<b>694 An all-in-one ecological risk assessment (ERA) tool: AIST-MeRAM</b>   B. Lin
Ballroom F	<b>Fate and Effects of Selenium</b>   Steven Canton, Kristin Bridges	<b>706 Pellston Overview: Simplifying environmental mixtures – an aquatic exposure-based approach via exposure scenarios</b>   G. Burton	<b>707 Aquatic exposures to chemical mixtures: an urban typology</b>   D. Muir	<b>708 Assessment of PAH Contribution to Superfund Site Hazard Using a Representative PAH Mixture and a Zebrafish Developmental Toxicity Model</b>   J. Minick
Ballroom G	<b>Ecosystem Services, Environmental Management and Decision Making</b>   Wayne Munns, Anne Rea	<b>714 Concentration dependence and interspecific differences in selenium partitioning between fish tissues</b>   A. deBruyn	<b>715 An adverse outcome pathway for the interaction between selenomethionine and hypersalinity in Japanese medaka (<i>Oryzias latipes</i>) embryos</b>   A. Kupsco	<b>716 Selenium toxicity to fish: the derivation and application of a multi-species dose-response slope</b>   E. Costa
Ballroom H	<b>Integrating Exposure and Effects to Assess and Manage Risk of Contaminants of Emerging Concern</b>   Susan Glassmeyer, Edward Furlong, Marc Mills, Herbert Buxton	<b>722 How to identify and assess ecosystem services approaches in decision making</b>   P. Calow	<b>723 Using ecological production functions to link ecological processes to ecosystem services</b>   L. Kapustka	<b>724 Ecosystem Services in Risk Assessment and Management</b>   W. Munns
Ballroom I	<b>What Do We Know About the Ecological Risk of Consumer and Personal Care Product Ingredients?</b>   Paul DeLeo, Iain Davies, James Lazorchak, Drew McAvoy	<b>730 Integrated Research to Assess Contaminants of Emerging Concern in the Environment</b>   S. Glassmeyer	<b>731 Environmental Chemical Mixtures: A Field Approach to Assessing Exposure and Effects</b>   P. Bradley	<b>732 Transport of pharmaceuticals and other emerging contaminants from wastewater discharge through surface water to drinking water intake and treatment</b>   E. Furlong
Ballroom J	<b>Nanomaterials Toxicology: Methods for Screening for Nano-Unique Hazard</b>   Alan Kennedy, Natalia Vinas	<b>738 Photofate of the uv-filters benzophenone-3 (oxybenzone) and benzophenone-4 (salisobenzene) in natural waters</b>   M. Semones	<b>739 The effect of salinity on the organic carbon/water partition ratios (Koc) of cyclic volatile methylsiloxanes (cVMS)</b>   D. Panagopoulos	<b>740 Evaluating the effects of triclosan on the rhizosphere of field crops in biosolids-amended soil</b>   R. Shahmohamadloo
Track	<b>Aquatic Toxicology and Ecology</b>	<b>Integrated Env Assessment and Management</b>	<b>Environmental or Analytical Chemistry</b>	<b>Linking Science and Social Issues</b>

## Thursday Afternoon Platform Presentations

3:00-3:15		3:20-3:35		3:40-3:55		4:00-4:15			
<b>Biases and Conflicts of Interest in Ecotoxicology: Perspectives From Academia, Government and Industry   Christine Lehman</b>									
664 Regulatory decisions will only be as credible as the science upon which the risk is evaluated   <i>C. Bishop</i>		665 Assessing Data to Support Regulatory Decisions: A USEPA Perspective   <i>T. Steeger</i>		666 Mechanisms that ensure the Reliability and Credibility of Science and Scientists in the Crop Biotechnology and Crop Protection Industries   <i>S. Levine</i>		667 Industry approaches to minimizing bias and promoting environmental health and sustainability   <i>C. Lehman</i>			
<b>Assessing the Potential for Multi-Ion Toxicity   Paul Paquin, Kevin Brix, Charles Delos, Rasa Bubnyte</b>									
672 Influence of dilution water composition on acute major ion toxicity to the mayfly <i>Neocloeon triangulifer</i>   <i>D. Soucek</i>		673 Osmoregulatory patterns in aquatic insects: What we know and where we need to go   <i>D. Buchwalter</i>		674 Modeling the Aquatic Toxicity of Major Ions Using Electrochemical Potential   <i>C. Delos</i>		675 Modeling the Aquatic Toxicity of Major Ions: Application of a Physiologically-Based Framework   <i>R. Bubnyte</i>			
<b>Environmental Fate, Transport and Modeling of Agricultural Chemicals   Scott Jackson</b>									
680 Occurrence of Current-Use Fungicides and Bifenthrin in Rainwater Basin Wetlands   <i>W. Mimbs</i>		681 Ecological Risk Assessment for Aquatic Invertebrates Exposed to Imidacloprid Part A: Exposure Assessment   <i>M. Winchell</i>		682 Development of Contributing Factors Influencing the Physical Description of Spray Drift Deposition   <i>R. Gali</i>		683 Fate of phenylpyrazole pesticides in a wastewater treatment plant and engineered wetland   <i>S. Supowitz</i>			
<b>Improving the Usability of Ecotoxicology in Regulatory Decision-Making   Jane Staveley, Marlene Agerstrand</b>									
688 Weight of Evidence Approaches in Improving the Usability of Ecotoxicology in Regulatory Decision-Making   <i>T. Hall</i>		689 Methods to increase regulatory impact of ecotoxicological research   <i>R. Wentzel</i>		690 Data Should NOT be Normalized to the Control for Analysis   <i>J. Green</i>		Discussion			
<b>Solution-Focused Risk Assessment   John Toll, Marc Greenberg</b>									
695 Successful Assessment, Remediation, and Closure of Remote California ATON Sites Through Regulator, Responsible Party, and Stakeholder Cooperation   <i>M. Luxon</i>		696 The 10th Criterion: Inter-comparison of Net Ecosystem Services as a Means to Evaluate Superfund Remedial Alternatives   <i>N. Osman</i>		697 Ecological risk assessment and improved conservation outcomes for water quality criteria consultations under the Endangered Species Act   <i>T. Augspurger</i>		Discussion			
<b>-.Omic" Technologies and Their Real-World Applications   Adam Biales, Doris E. Vidal-Dorsch</b>									
702 In Situ Field-Based Metabolomics for Evaluating the Impacts of Contaminants of Emerging Concern Relative to Other Stressors   <i>T. Collette</i>		703 Individual variability in fish transcriptomes: The influence of reproductive strategy and gonadal stage   <i>D. Dreier</i>		704 Integrating high-throughput RNA sequencing in the health assessment of yellow perch populations from the St. Lawrence River, Canada   <i>M. Houde</i>		705 Moving 'omics into environmental regulation: issues, applications and a path forward   <i>A. Biales</i>			
<b>Environmental mixtures of chemicals: Aquatic exposure-based approaches for simplification and implementation   Christopher Holmes, Derek Muir, Scott Dyer</b>									
710 Using prospective assessment to assess mixtures in municipal wastewater effluents   <i>J. Diamond</i>		711 A retrospective approach to assessing mixtures in municipal wastewater effluents   <i>K. Kidd</i>		712 Seasonal and spatial variations of ecotoxicity and basic water quality in two watershed areas in Japan: Multivariable analyses to find a trend   <i>H. Yamamoto</i>		713 Risk assessment for mixtures of agricultural chemicals in surface water; a SETAC Pellston workshop update   <i>C. Holmes</i>			
<b>Fate and Effects of Selenium   Steven Canton, Kristin Bridges</b>									
718 Using dynamic modeling to determine the mechanisms of selenium biotransformation in green algae   <i>A. Zupanic</i>		719 Enrichment Factor Variation in Calibration of a Selenium Bioaccumulation Model   <i>H. Ohlendorf</i>		720 Comparison of one-step versus multi-step selenium bioaccumulation models in support of developing aqueous environmental benchmarks   <i>J. Van Geest</i>		721 Future Selenium Research Priorities   <i>P. Chapman</i>			
<b>Ecosystem Services, Environmental Management and Decision Making   Wayne Munns, Anne Rea</b>									
726 A Demonstration of the Feasibility of Utilizing the Ecosystem Services Concept and Non-chemical Stressors in a Complex Environmental Problem   <i>C. Stahl</i>		727 Using Ecosystem Service Indicators to Prioritize Land Conservation Investments: An Application for the Taunton River Watershed   <i>G. Van Houtven</i>		728 Ecosystem services as risk assessment endpoints for the South River, VA   <i>M. Harris</i>		729 Carbon Sequestration potential in agricultural drainage ditches   <i>O. Iseyemi</i>			
<b>Integrating Exposure and Effects to Assess and Manage Risk of Contaminants of Emerging Concern   Susan Glassmeyer, Edward Furlong, Marc Mills, Herbert Buxton</b>									
734 Wastewater to drinking water: In vitro estrogen, androgen, and glucocorticoid activity along an urban river system   <i>J. Conley</i>		735 Application of a miniaturized Ames assay for high-throughput effect-directed analysis of water samples using microfractionation   <i>M. Lamoree</i>		736 1,4-Dioxane: Occurrence, sources, and treatment options for an emerging surface water contaminant   <i>C. Lopez-Velardia</i>		737 Halogenated Carbazoles in San Francisco Bay   <i>D. Chen</i>			
<b>What Do We Know About the Ecological Risk of Consumer and Personal Care Product Ingredients?   Paul DeLeo, Iain Davies, James Lazorchak, Drew McAvoy</b>									
742 Environmental Risk Assessment Framework for Down-the-Drain" Consumer Product Chemicals in China"   <i>M. Fan</i>		743 Screening Level Environmental Risk Assessment (ERA) of Cosmetic Ingredients in the USA and Beyond   <i>I. Davies</i>		744 Mapping risk assessment priorities for HPC ingredients: a chemical space analysis   <i>T. Guoin</i>		745 Using Weight of Evidence to Evaluate Potential Effects of Trace Organics on Aquatic Life   <i>J. Wolfe</i>			
<b>Nanomaterials Toxicology: Methods for Screening for Nano-Unique Hazard   Alan Kennedy, Natalia Vinas</b>									
750 Comparative Bioavailability and Toxicity of Silver Nitrate and Silver Nanoparticles Across a Salinity Gradient in <i>Fundulus grandis</i> Embryos   <i>C. Tseng</i>		751 The zebrafish embryo as a model to determine unique and specific biological impacts of nanoparticles   <i>N. Vinas</i>		752 Novel methods for quantifying, predicting, and screening for, nano-unique phototoxicity of TiO2; an example based on cementitious TiO2   <i>S. Diamond</i>		753 Silver nanoparticle toxicity in a marine gastropod <i>Telescopium</i> , a potential biomonitor of tropical intertidal mangrove sediments   <i>S. Palani</i>			
<b>Regulatory Directions</b>		<b>Remediation/Restoration</b>		<b>Special Symposia</b>		<b>Terrestrial or Wildlife Toxicology and Ecology</b>			

# Thursday Poster Presentations

## Schedule

Setup 7:00 a.m.–8:00 a.m.

Take Down 5:35 p.m.–6:00 p.m.

Presenters are expected to attend their poster during all break periods and evening poster social to discuss their work with scientists visiting their poster.

**Coffee Breaks** 9:15 a.m.–10:00 a.m. and 2:15 p.m.–3:00 p.m.

**Lunch Break** 11:15 a.m.–1:00 p.m.

**Poster Social** 4:15 p.m.–5:35 p.m.

### Environmental Benefits and Ecosystem Accounting: Getting to Resolution

Lisa Saban, Richard Wenning

**RP001** Endpoints at war: using integrated human services and ecological risk assessment to evaluate trade-offs in ecological restoration and remediation | *W. Landis*

**RP002** Informing Decisions and Investments for Resilient Engineering and Ecosystems | *T. Bridges*

**RP003** Innovative Remediation and Habitat Restoration Approaches on Corporate Lands: A Case Study of Wetland Mitigation in a Heavily Industrialized Waterfront | *M. Laska*

**RP004** Utility of Environmental Accounting To Inform Eco-Restoration Decisions and Investments | *R. Wenning*

**RP005** Will access to mitigation bank restoration credits result in the efficient resolution of natural resource damage claims? | *M. Johns*

### Environmental Fate, Transport and Modeling of Agricultural Chemicals

Scott Jackson

**RP006** Effects of environmental factors on neonicotinoid degradation | *M. McManus*

**RP007** Inter-compartmental transport of organophosphate and pyrethroid pesticides in South China: Implication for a regional risk assessment | *H. Li*

**RP008** Joint toxicity of thiamethoxam and propiconazole to *Lumbricus variegatus* and *Chironomus riparius* | *V. Carrasco Navarro*

**RP009** Moving Towards a Probabilistic Analysis of Wildlife Exposure to Treated Seed in Risk Assessment | *K. Garber*

**RP010** Occurrence of Neonicotinoid Pesticides in Urban Wastewater Infrastructure | *A. Sadaria*

**RP011** Organophosphate Pesticides, Surface Water, and California Agriculture | *A. Patton*

**RP012** Pesticide sediment partitioning and exposure modeling | *B. Marsh*

**RP013** Photodegradation of 2,6-dichloro-4-nitroaniline (DCNA) in Freshwater and Saltwater | *E. Vebrosky*

**RP014** Quantum yields for direct photolysis of neonicotinoid insecticides in water: Implications for exposure to non-target aquatic organisms | *J. Challis*

**RP015** Tissue distribution of organochlorine pesticides (OCPs) in largemouth bass (*Micropterus salmoides*): case studies with a single oral dose and wild fish | *V. Dang*

**RP016** Unsaturated column for evaluation of pesticide behavior in soil | *L. Gui*

**RP017** Mitigation strategies for reducing aquatic toxicity from organophosphate pesticides in cole crops | *B. Phillips*

**RP018** Ecological Risk Assessment for Aquatic Invertebrates Exposed to Imidacloprid Part B: Effects Metrics and Risk Characterization | *M. Whitfield Aslund*

### The Continuing Evolution of Sediment Toxicity Methods and Data Interpretation

Christian Picard, Chris Ingersoll, Curtis Eickhoff

**RP019** Method Refinements for the Midge, *Chironomus dilutus*, Life-cycle Test | *T. Norberg-King*

**RP020** Age-related sensitivity of three common sediment assay organisms exposed to a representative pyrethroid insecticide | *M. Bradley*

**RP021** An evaluation of endpoint sensitivity for benthic invertebrate chronic toxicity tests | *J. Gates*

**RP022** Evaluating the toxicity of Southeastern USA stream sediments with *Hyalella azteca*, *Chironomus dilutus*, and *Lampsilis siliquoidea* | *N. Kemble*

**RP023** Evaluation of sediment chemistry and sediment toxicity in wadable streams of the Midwestern US | *P. Moran*

**RP024** Comparison of effects to embryos of fresh and salt water medaka using new toxicity test with real sediments | *S. Uno*

**RP025** Effects of sediments collected from real environment to Japanese medaka (*Oryzias latipes*) embryos | *K. Emiko*

### Bioaccumulation in Management and Regulation

Doris E. Vidal-Dorsch, Frank Gobas

**RP026** Development of a Bioaccumulation Model for DDTs in a Pelagic Food Web | *J. Arblaster*

**RP027** Framework for Addressing Bioaccumulation Potential of Human Pharmaceuticals | *D. Huggett*

**RP028** Hepatic biotransformation of 14C-decamethylcyclopentasiloxane (D5) and 14C-decamethyltetrasiloxane (L4) in fish, birds and mammals | *D. Huggett*

**RP029** Occurrence and Trophic Magnification of PCNs, HBCDs, and DPs in the Ecosystem of King George Island, Maritime Antarctica | *J. Kim*

**RP030** PCBs Associated with Suspended Solids in the Green River Watershed; an Upstream Source to Lower Duwamish Waterway Superfund Site | *D. Williston*

**RP031** Site-specific application of the Bioaccumulation and Aquatic System Simulator (BASS) for mercury bioaccumulation in the South River, Virginia | *B. Reese*

### Nanomaterials Toxicology: Methods for Screening for Nano-Unique Hazard

Alan Kennedy, Natalia Vinas

**RP032** A zebrafish embryo toxicity testing screening framework for determining nano vs. non-nano unique effects | *N. Garcia-Reyero*

**RP033** Dissolution of Metal Nanoparticles: Methods for Determining the Contributions to Nanoparticle Toxicity | *J. Steevens*

**RP034** Influences of incubation conditions on toxicity of partially insoluble ZnO nanoparticles for seed germination and bacterial bioluminescence | *I. Kong*

**RP035** Quantitative Structure – Mesothelioma Potency Model Optimization for Complex Mixtures of Elongated Particles in Rat Pleura | *D. Hoff*

### Molecular, Individual and Population Effects of Contaminants in Herpetofauna and Incorporation Into Risk Assessment

Scott Weir, Stacey Lance

**RP036** Investigating small molecule changes in Diamondback Terrapins in response to chronic mercury exposure using 1H NMR-based metabolomics | *F. Nilsen*

**RP037** Blood chemistry analysis of Nile Crocodiles (*Crocodylus niloticus*) from Kruger National Park and Flag Boshelo Dam, South Africa | *M. Guillette*

**RP038** Contamination in Snakes and food-web structure among snake species in the Okanagan Valley, BC | *C. Bishop*

### What Do We Know About the Ecological Risk of Consumer and Personal Care Product Ingredients?

Paul DeLeo, Iain Davies, James Lazorchak, Drew McAvoy

**RP039** Hormonal related genes are affected by UV filters 4MBC and BP3 in the midge *Chironomus riparius* | *J. Martinez-Guitarte*

**RP040** Endocrine disruption via enzyme exhaustion: Triclosan elevates estradiol levels in the female mouse | *T. Pollock*

**RP041** A comparison between temperate and subtropical regions; bioaccumulation and toxicity of sediment-associated Triclosan in *Tubifex tubifex* | *R. Windfeld*

**RP042** Toxicological responses following water exposure to ethylhexyl methoxycinnamate in Japanese medaka (*Oryzias latipes*) | *I. Lee*

**RP043** IFRA Environmental standards: Risk and hazard assessment update for 2015 | *A. Lapczynski*

**RP044** Spatial Distribution of Synthetic UV Screen and Wastewater Chemicals in Marine Waters Adjacent to Two High-Use Beaches | *T. Bargar*

**RP045** Practical development and application of a Mexico Dilution Model for environmental exposure assessments of down-the-drain chemicals | *S. Quinn*

**RP046** Development of iSTREEM® 2.0, new enhancements for down-the-drain model to support environmental exposure assessments across multiple commodity groups | *R. Vamshi*

### Ecological Soil Screening Levels: Evaluating Their Applicability From an Ecologically Realistic Perspective

Steven Jones

**RP047** Making the World Safe for Shrews: Good Policy and Good Science or Unintended Consequence of Conservatism? | *D. Smith*

**RP048** Do Ecological Soil Screening Levels Really Work? | *R. Wenning*

**RP049** Refining Ecological Soil Screening Levels Using Benchmark Dose Analysis | *D. Skall*

**RP050** Putting toxicological risks to plant life on île Rouge, Quebec into context through the use of a method to assess the general health of vegetation | *J. Olson*

**RP051** Eco SSLs and Other Lines of Evidence in Refinement of Chemicals of Concern for a Metals-Contaminated Site | *P. Fuchsman*

**RP052** Critical Review of Lead and Mercury Ecological Benchmarks in Soil | *K. Cejas*

**RP053** Evaluation of Risk to Terrestrial Ecological Receptors in Linear Corridors and the Influence of Toxicity Reference Value Selection | *T. Small*

### Predictive Methods for Assessing Persistence, Bioaccumulation or Toxicity

Yunzhou Chai, Jennifer Rhoades

**RP054** A bioenergetic/bioaccumulation model for persistent organic pollutants in aquatic and terrestrial food webs | *Y. Fan*

**RP055** Effects of Landscape Factors on Mercury and Methylmercury Contamination and Bioaccumulation in East Fork Poplar Creek Watershed, Tennessee | *S. Adelanke*

**RP056** Evaluating the Role of UV Exposure and Recovery in PAH Phototoxicity | *J. Gnau*

**RP057** Joint Toxicity of bifenthrin and Headline AMP® Active Ingredients to the Amphipod *Hyalella azteca* | *W. Mimbs*

Track

Aquatic Toxicology and Ecology

Integrated Env Assessment and Management

Environmental or Analytical Chemistry

Linking Science and Social Issues

# Thursday Poster Presentations

**RP058** MOAtox: A comprehensive mode of action and acute aquatic toxicity database for predictive model development | *M. Barron*

**RP059** Predicting Abraham Parameters From Molecular Structure Using a Quantum Chemical Method | *D. Di Toro*

**RP060** Predictive approaches for assessing the environmental safety of industrial chemicals | *Y. Chai*

**RP061** Screening chemicals used in hydraulic fracturing for aerobic and anaerobic biodegradation potential | *M. Kawa*

**RP062** Using Web-based Interspecies Correlation Estimation (Web-ICE) models as a tool for acute toxicity prediction | *M. Willming*

**RP063** Validation of a calculation method for molecular size to estimate the bioaccumulation potential | *C. Miyata*

## Solution-Focused Risk Assessment

John Toll, Marc Greenberg

**RP064** A Case Study Linking Pesticide Application at Local Scales to Population-Level Assessment Endpoints for an Endangered Songbird | *D. Dishman*

**RP065** Conceptual Framework for Trait-Based Ecological Risk Assessment for Wildlife Populations Exposed to Pesticides | *J. Awkerman*

**RP066** Water quality criteria and priority setting of typical toxic pollutants in China: Method and a case study of Lake Chaohu | *W. Wu*

## Assessing the Potential for Multi-Ion Toxicity

Paul Paquin, Kevin Brix, Charles Delos, Rasa Bubnyte

**RP067** A Preliminary Assessment of Sulfate Aquatic Life Criteria | *J. Justice*

**RP068** Ceriodaphnia response to dissolved ions in pulp and paper mill effluents | *C. Flinders*

**RP069** Chronic toxicity of NaCl and NaHCO<sub>3</sub> salts in binary mixtures can be described using additive toxic unit model | *A. Redman*

**RP070** Comparison of Field-based Methods for Estimating the Annual Maximum Specific Conductivity Tolerated by Freshwater Invertebrates | *C. Flaherty*

**RP071** Saline wastewaters from oil development in the Bakken Shale region; toxicity to daphnids and aquatic macrophytes in hard, simulated background waters | *A. Farag*

**RP072** The chronic toxicity of multi-ion exposures to fathead minnows (*Pimephales promelas*) | *K. Johnson*

**RP073** Total Dissolved Solids Toxicity: Full-Scale Solutions | *R. Lockwood*

**RP074** Toxicity of desalination brine of varying ionic compositions on embryonic development of Japanese medaka (*Oryzias latipes*) | *A. Kupsco*

## Improving Environmental Risk Assessment and Management by Applying Mechanism-Based Effect Models | *Annemette Palmqvist, Valery Forbes*

**RP075** A bioenergetic modeling framework to understand effects of anthropogenic stressors on interacting aquatic species | *A. East*

**RP076** Adverse outcome pathway assessment for a series of model toxicants | *K. Gillies*

**RP077** Assessing the risk of adverse reproductive effects on threatened and endangered birds from exposure to pesticides using MCnest | *M. Etterson*

**RP078** Ecological relevance in PERA: a DEB-IBM approach | *O. Price*

**RP079** Exploring the effects of temperature and resource limitation on mercury bioaccumulation in *Fundulus heteroclitus* using dynamic energy budget modeling | *B. Clark*

**RP080** Modeling combined effects of exposure to nickel and global warming: from individual energy budgets to ecosystem processing | *N. Galic*

**RP081** Scaling the sublethal effects of methylmercury to yellow perch population dynamics using adverse outcome pathway framework | *C. Murphy*

**RP082** Scaling up from an individual to a population-level assessment for risks of pesticides to threatened and endangered birds | *A. Kanarek*

**RP083** The Terrestrial Investigation Model: a probabilistic risk assessment model for birds exposed to pesticides | *K. Garber*

**RP084** Using mechanistic effect models in regulatory risk assessments – experiences from a modeler's perspective | *M. Meli*

## "Omic" Technologies and Their Real-World Applications | *Adam Biales, Doris E. Vidal-Dorsch*

**RP085** Auto Regressive Moving Average Model Represents High Dimensional Toxicogenomic Data and Improves Clustering Performance | *S. Rahman*

**RP086** Diversity of sediment microbial community in response to acid mine drainage pollution in the Hengshi River (Southeast China) | *S. Tang*

**RP087** Ecotoxicoproteomic approach to biomarker assessment in *Crassostrea brasiliensis* exposed to diesel fuel water-accommodated fraction (WAF) | *G. Muller*

**RP088** Gene prediction in the fathead minnow (*Pimephales promelas*) genome | *T. Saari*

**RP089** Investigating the potential use of frog skin microbiomes to monitor endocrine disrupting compounds | *T. Van Rossum*

**RP090** Lipidomic analysis of eicosanoids in adipose tissue of pansteatitis-affected Mozambique Tilapia from Loskop Dam, South Africa | *T. Cantu*

**RP091** Metagenomics analysis of microbial communities potentially involved in natural copper depletion at a proposed Northern Canadian mine site | *H. Osachoff*

**RP092** Pathway-Based Points of Departure in Zebrafish Embryos to Identify Adverse Outcomes for Hazard Screening | *K. Gust*

**RP093** Responses of Early Life Stage Exposure in Madaka to 1,2,5,6-Tetrabromocyclooctane (TBCO) on Transcriptome Level and Proteome Level | *J. Sun*

**RP094** Toxic Detection by Portable Kit Based on Lysosomal Enzymes in *Saccharomyces cerevisiae* | *N. Nguyen*

**RP095** Understanding the effects and mode of action of emerging contaminants (Benzotriazoles) using RNA-sequencing in *Daphnia magna* | *M. Houdé*

**RP096** Using decision tree to classify trace metal on the basis of SELDI-TOF MS data of mayfly egg, *Ephemera orientalis* | *H. Mo*

## LCA Lessons Learned from Case Studies

David Meyer, Annie Weisbrod, Susan Csiszar

**RP097** Quantifying the use-phase impact of chemicals in flooring materials | *L. Huang*

**RP098** Case Study - Life Cycle Assessment of Soy Protein Isolate | *A. Berardy*

**RP099** Life Cycle Environmental Impacts of Grass-fed Beef Production in the Northeastern US | *N. Tichenor*

**RP100** Life Cycle Assessment for Dredged Sediment Placement Strategies | *C. Fox-Lent*

## Environmental or Analytical Chemistry General - Part 3

**RP101** A strategic screening approach to identify micropollutants and transformation products appearing along rivers | *Z. Li*

**RP102** Chemical characterization of indoor dust by comprehensive target and non-target screening using GC-QTOF-MS and LC-QTOF-MS | *C. Moschet*

**RP103** Chronic exposure to acrylamide may produce tumors in the thyroids of rats by molecular pathways other than direct genotoxicity | *N. Denslow*

**RP104** Contamination profiles of trace elements in sediments of Savannah River Estuary, Savannah, Georgia, USA | *K. Sajwan*

**RP105** Evaluation of modeling approaches to describe marine natural organic matter binding with copper | *K. Croteau*

**RP106** Investigating 134Cs and 137Cs levels in abiotic and biotic samples from British Columbia, Canada, following the Fukushima Nuclear Accident | *T. Domingo*

**RP107** Screening Crude Oil-Polluted Water for Endocrine Activity | *C. Clark*

**RP108** The Influence of Alternating Wetting and Drying on the Nutritional Quality of Rice Grain | *S. Røthenberg*

**RP109** The InFORM project: An effort to determine the impact of the Fukushima disaster on Canada's oceans and residents | *J. Cullen*

## Aquatic Toxicology and Ecology General - Part 4 | Scott Belanger

**RP110** Assessing aquatic toxicity and risks for compounds whose toxicity is based on multiple modes of toxicity – using para-nonylphenol as an example | *C. Staples*

**RP111** Characterization of toxicity pathways of 2,3,7,8-TCDD, PCB 77, and benzo[a]pyrene in white sturgeon using whole transcriptome and proteome analyses | *J. Doering*

**RP112** Comparing the Effects of PBDEs on Reproductive and Thyroid Function in Adult and Early Life Stage Fathead Minnows | *L. Thornton*

**RP113** Crafting a Gene Expression Timeline for the Thyroid in the Early-Life Stages of Fathead Minnows (*Pimephales promelas*) | *E. Randolph*

**RP114** Determining the Effects of Bisphenol A (BPA) on Reproduction in *Caenorhabditis elegans* | *T. Gray*

**RP115** Developmental toxicity and endocrine disrupting properties of tris(2-butoxyethyl) phosphate (TBOEP) in zebrafish embryos/larvae | *H. Liu*

**RP116** Effects of cyclooxygenase inhibitor ibuprofen on prostaglandin synthesis and reproductive behavior in zebrafish | *J. Feely*

**RP117** Embryo Toxicity of Japanese Medaka (*Oryzias latipes*) through the Retinoic Acid Signaling Pathway | *M. Overturf*

**RP118** Environmental gestagens: Exposure effects on the fathead minnow from receptor activation to altered reproductive biology | *E. Orlando*

**RP119** Genetic basis for evolved tolerance to dioxin-like pollutants in wild Atlantic killifish: more than the aryl hydrocarbon receptor | *D. Nacci*

**RP120** Gonadal intersex in smallmouth bass *Micropterus dolomieu* in northern Indiana: prevalence, severity, molecular biomarkers and novel screening methods | *A. Abdelmoneim*

**RP121** Identification of potential biomarkers in the freshwater snail *Physa acuta* in response to bisphenol A (BPA) exposure | *J. Martinez-Guitarte*

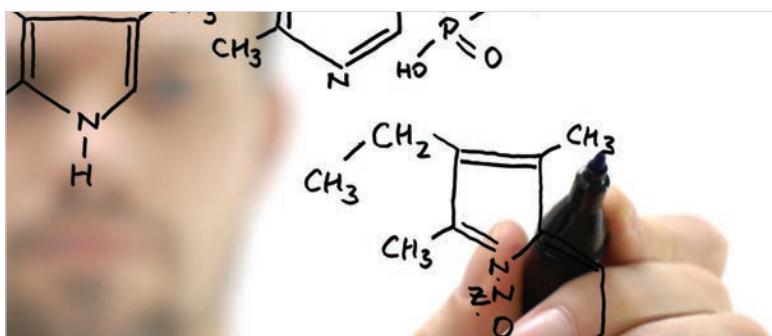
**RP122** Impacts of PPCPs on brain and spinal gonadotropin releasing hormone neuron growth and proliferation using a transgenic zebrafish expressing GnRH3 | *J. Crago*

**RP123** Identification of Tricosan Specific Biomarkers from *Daphnia magna* based on Proteomic Analysis | *H. Shin*

## Poster Presentations

**RP124** Multivariate Regression Analysis of Atlantic Bottlenose Dolphin Body Burden Contaminants | *M. Cains*  
**RP125** Mutagenic and toxicological results from Ukrainian Surface Waters | *K. Ho*  
**RP126** Nitrate- and Estrogen-induced Endocrine Disruption in the Fathead Minnow (Pimephales promelas) | *A. Moore*  
**RP127** Optimizing a LC-MS/MS-Based Phosphoproteomic Pipeline for the Identification of Signaling Pathways Activated by Chemical Exposure in Aquatic Species | *L. Smith*  
**RP128** Perchlorate and Thyroid Hormone Modulates Arsenite-Induced Oxidative Stress | *C. Theodorakis*  
**RP129** Screening potential biomarkers of Lead (II) acetate trihydrate and Atrazine based on Daphnia magna proteomic analysis | *V. Le*  
**RP130** Sequencing and expression of CYP1A, vitellogenin and metallothionein of *Gambusia* spp. inhabiting tropical karstic water bodies | *G. Rodriguez-Fuentes*

**RP131** Short-term, *in vivo* screening method for detecting chemicals with juvenile hormone activity using adult *Daphnia magna* | *R. Abe*  
**RP132** The effects of salinity and dissolved oxygen on biomarkers of estrogen exposure in male fathead minnows, *Pimephales promelas* | *D. Feifarek*  
**RP133** The effects of select pharmaceuticals on swim bladder inflation of Japanese medaka (*Oryzias latipes*) embryos | *Z. Pandelides*  
**RP134** The effects of thyroid hormones and thyroid hormone disruptors on chemosensation in North American bullfrog (*Lithobates catesbeianus*) tadpoles | *J. Heerema*  
**RP135** The induction of P-glycoprotein-mediated xenobiotic efflux activity alters ivermectin and emamectin benzoate neurotoxicity in rainbow trout | *C. Kennedy*  
**RP136** *In vitro* Assessment of Androgenic Activity of Water Reclamation Plant Effluents in Greater Chicago | *A. Lukowicz*  
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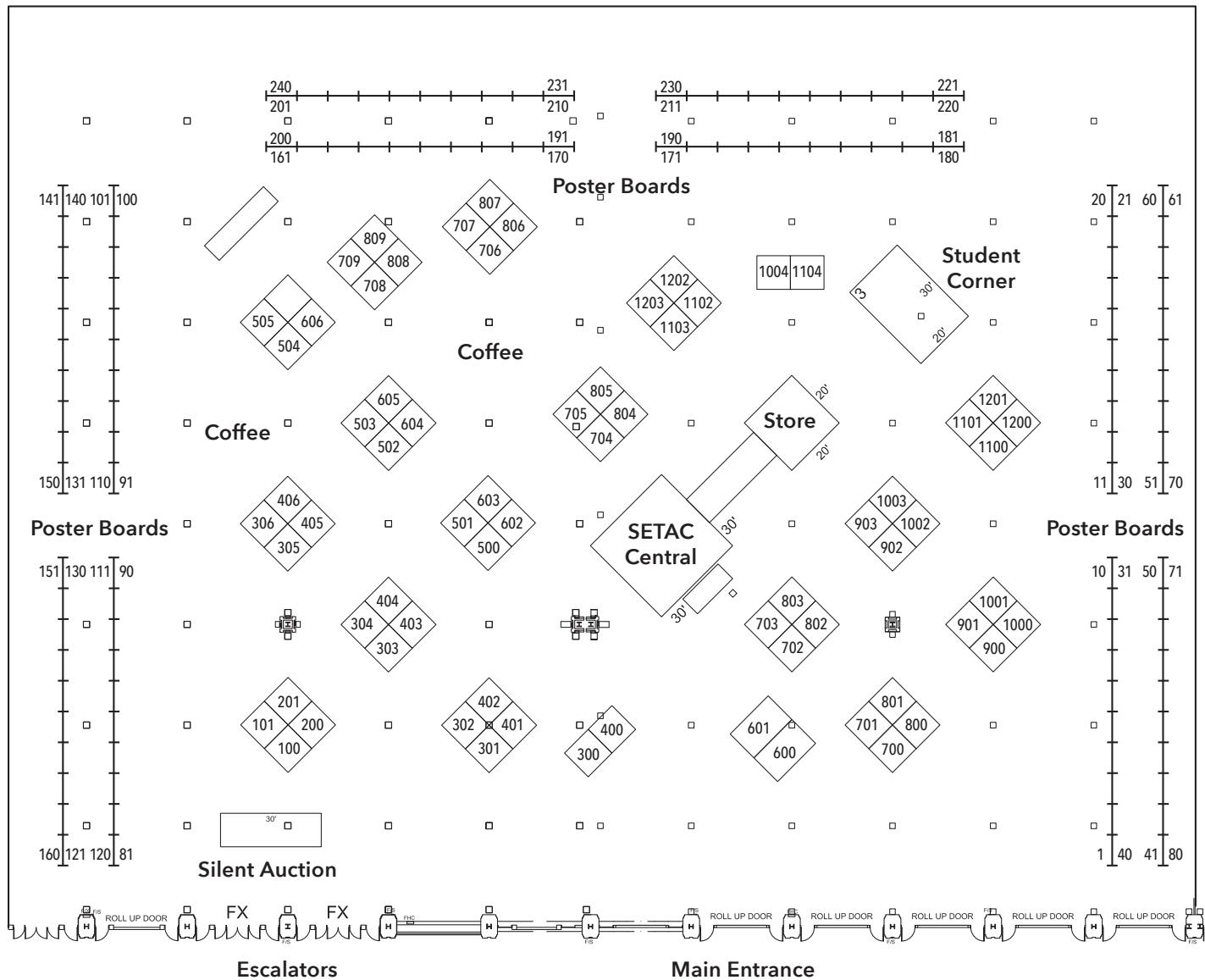
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## Booth Schedule | Booth 709

Monday, 2 November	Tuesday, 3 November	Wednesday, 4 November
9 a.m.-11 a.m. Ozark-Prairie and Pacific Northwest	9 a.m.-11 a.m. Carolinas and South Central	9 a.m.-11 a.m. Midwest
11 a.m.-1 p.m. Rocky Mountain	-----	11 a.m.-1 p.m. Chesapeake-Potomac
1 p.m.-3 p.m. Southeast	1 p.m.-3 p.m. Hudson-Delaware	1 p.m.-3 p.m. Mid South
4 p.m.-5 p.m. Northern California	3 p.m.-5 p.m. Prairie Northern	3 p.m.-5 p.m. Southern California

## EXHIBITORS

Booth	Exhibitor	Booth	Exhibitor
500/602	ABC Laboratories	405	GHD
603	ACZ Laboratories, Inc.	803	Great Lakes Environmental Center, Inc. (GLEC)
800	ADPEN Laboratories, Inc.	100	Horizon Technology, Inc.
201	AECOM	1101	iChrom Solutions
707	Agilent Technologies, Inc.	1004	LGC Standards
902	ALS Environmental	1000	Loligo Systems
708	American Board of Toxicology, Inc.	404	Maxxam Analytics
705	Aquatic BioSystems, Inc.	1200	National Library of Medicine
301/401	Arcadis	606	Omni International
302	Axys Analytical Services Ltd.	505	PerkinElmer
804	Battelle	807	Postnova Analytics
305	Baylor University, Environmental Science	303	Ramboll ENVIRON
1002	Brooks Rand Instruments	709	SETAC Regional Chapters
200	C.I.Agent Stormwater•Solutions	502	Simulations Plus, Inc.
605	Cambridge Isotope Laboratories, Inc.	600/601	Smithers Viscient
704	Cardno	806	Springer
1202	ChemAxon	1104	Symbiotic Research LLC
402	Compliance Services International	801	SynTech Research
306/406	CRC Press- Taylor & Francis Group, LLC	1102/1103	TDI-Brooks International
304	CytoViva, Inc.	706	Teledyne Leeman Labs
607	Diapharma Group, Inc.	702	Tetra Tech, Inc.
604	EA Engineering, Science, and Technology, Inc.	900	Thermo Scientific
1203	EcoAnalysts, Inc.	808	ToxPlanet
1100	Envigo	1001	ToxStrategies
501	Environmental Sampling Technologies, Inc.	700/701	US Environmental Protection Agency
403	EPL, Inc.	101	Vista Analytical Laboratory
805	Eurofins Scientific	901	Waterborne Environmental, Inc.
903	Exponent, Inc.	1003	Wellington Laboratories Inc.
503	FMS, Inc.	802	WIL Research
703	Frigid Units, Inc.	300/400	Wildlife International, a Division of EAG, Inc.
504	GEI Consultants, Inc.	1201	Wiley

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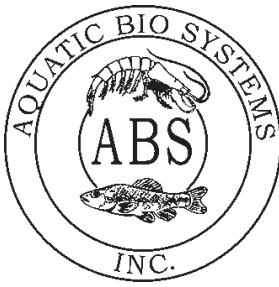
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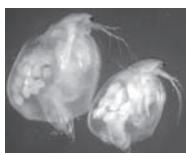
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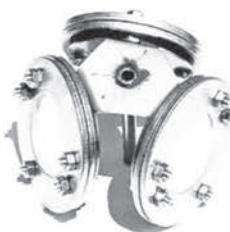
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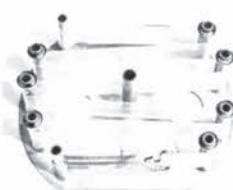
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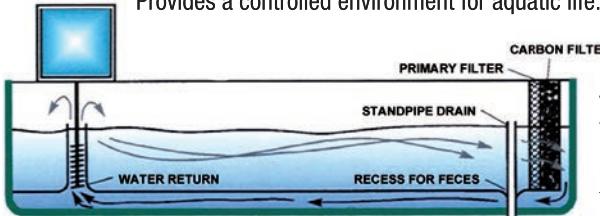
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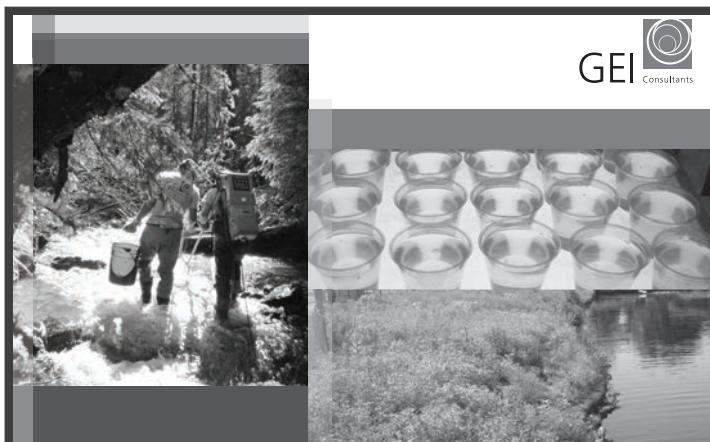
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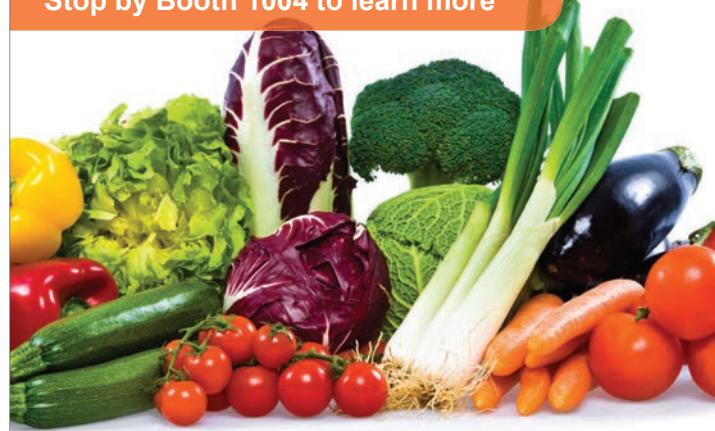
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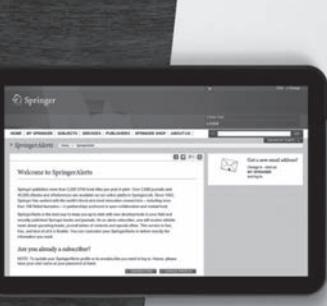


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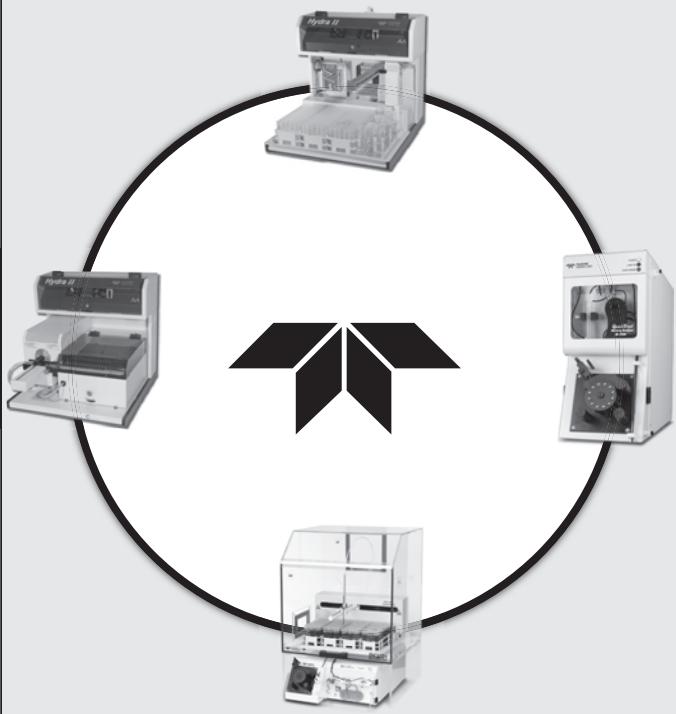
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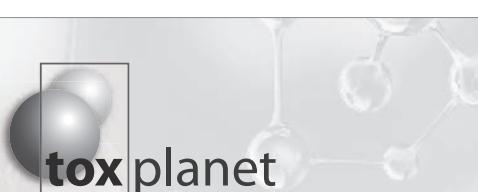
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