

# Freshwater HABs News



Ernst Ludwig Kirchner  
Oil on Canvas, 1920

EPA and 11 other federal agencies have released an interagency report titled [\*\*Harmful Algal Blooms and Hypoxia Comprehensive Research Plan and Action Strategy: An Interagency Report\*\*](#) in response to the Harmful Algal Bloom and Hypoxia Research and Control Act (HABHRCA). The report highlights progress that federal agencies have made over the past decade and the current state of the science on harmful algal blooms (HABs) and hypoxia, two costly and scientifically complicated aquatic issues that affect every region of the United States. The report also includes high-level recommendations and gaps in the detection, assessment and mitigation efforts of HABs and hypoxia, as identified by stakeholders around the country. The federal agencies will continue expanding stakeholder engagement to reduce human impacts from HABs toxins and hypoxia by improving communication using methods such as a community practice website and risk communication tools. The federal agencies are working on an action strategy and research plan for addressing HABs and hypoxia in the Great Lakes. For more information, please refer to [\*\*Harmful Algal Bloom and Hypoxia Research and Control Act\*\*](#) and the [\*\*Tackling Harmful Algal Blooms\*\*](#) blog, a joint blog by officials from EPA, NOAA, and the White House's National Science and

## [\*\*Inland HABs Group Webinar on the Great Lakes\*\*](#)

EPA held a webinar on *HABs in the Great Lakes* on March 10<sup>th</sup> from 11:30 to 1:30pm. Speakers included: Melanie Adam from the Great Lakes Commission, Donna Francy and Chris Ecker from USGS, Jiyoung Lee from Ohio State University, and Heather Raymond and Amy Klei from Ohio EPA. Presentations and audio recording are posted in the Inland HABs discussion Group webpage.

## [\*\*Public Meeting and Webinar: Managing Cyanotoxins in Drinking Water\*\*](#)

The EPA is holding a public meeting on April 29, 2016, from 9:15 a.m. to 12:30 p.m., Central Standard Time at 77 West Jackson, Blvd, Chicago, IL, in the Lake Michigan conference room on the 12th floor. The purpose of this public meeting is to provide input either in person or online via a webinar on lessons learned after the release of the [\*\*June 2015 Recommendations for Public Water Systems to Manage Cyanotoxins in Drinking Water\*\*](#). The agency plans to use this information to inform development of additional tools to support states and/or utilities in managing cyanotoxins in drinking water. Those interested in attending the meeting in person or online via webinar must register no later than 5:00 p.m., Eastern Daylight Savings Time, on April 28, 2016. Follow this link for more information and to [\*\*register\*\*](#).

## [\*\*Fish kills in the Indian River\*\*](#)

Fish kills have been reported in the Banana River and Indian River in Brevard County, nearly 100 miles away from where fresh water released from Lake Okeechobee by the U.S. Army Corps of Engineers mixes with brackish water in the St. Lucie River and Estuary. The Brevard County Health Department and St. Johns River Water Management District have attributed the deaths in their area to "Brown Tide" algae blooms.

## [\*\*Chemical, Biological and Instrumental methods for detecting harmful\*\*](#)

[\*\*algae and their natural toxins\*\*](#) session at the SETAC North America 37th Annual Meeting / 7th SETAC World Congress to be held November 5-10 in Orlando, FL.

## Upcoming Events

### [\*\*2016 Recreational Waters Conference\*\*](#)

April 12 – 15, 2016  
New Orleans, LA

### [\*\*US Algal Toxin Conference 2016\*\*](#)

May 9-11, 2016  
Akron, Ohio

### [\*\*Summer 2016 Field Courses on Algae\*\*](#)

May – July, 2015  
Iowa Lakeside  
Laboratory

### [\*\*ASLO 2016\*\*](#)

June 5 – 10, 2016  
Santa Fe, New  
Mexico

### [\*\*IAGLR 2016\*\*](#)

June 6 to 10, 2016  
Guelph, Ontario

### [\*\*17th ICHA\*\*](#)

October 9-14, 2016  
Florianapolis, Brazil

### [\*\*10<sup>th</sup> ICTC\*\*](#)

October 23-28, 2016  
Wuhan, China

### [\*\*SETAC 2016\*\*](#)

November 6-10, 2016  
Orlando, FL

**Toxins Topical Collection "[Freshwater HABs and Health in a Changing World](#)"**

To submit a manuscript please visit [www.mdpi.com](http://www.mdpi.com) by [registering](#) and [logging in to this website](#).

## RECENTLY PUBLISHED ARTICLES

### [Toxicological perspective to climate change: aquatic toxins](#)

Luis M. Botana. *Chem. Res. Toxicol.*, Publication Date (Web): 09 Mar 2016

### [The effects of water sample treatment, preparation, and storage prior to cyanotoxin analysis for cylindrospermopsin, microcystin and saxitoxin](#)

Lisa Kamp, Jennifer L. Church, Justin Carpino, Erin Faltin-Mara, Fernando Rubio. *Chemico-Biological Interactions*, Vol. 246, February 25, 2016, 45-51

### [Heart Alterations after Domoic Acid Administration in Rats](#)

Andres C. Vieira, José Manuel Cifuentes, Roberto Bermúdez, Sara F. Ferreira, Albina Román Castro and Luis M. Botana. *Toxins* 2016, 8(3), 68

### [Characterization of Enzymatic Activity of MlrB and MlrC Proteins Involved in Bacterial Degradation of Cyanotoxins Microcystins](#)

Dariusz Dziga, Gabriela Zielinska, Benedykt Wladyka, Oliwia Bochenska, Anna Maksylewicz, Wojciech Strzalka and Jussi Meriluoto. *Toxins* 2016, 8(3), 76

### [Cylindrospermopsin Biodegradation Abilities of \*Aeromonas\* sp. Isolated from Rusalka Lake](#)

Dariusz Dziga, Mikolaj Kokocinski, Anna Maksylewicz, Urszula Czaja-Prokop and Jakub Barylski  
*Toxins* 2016, 8(3), 55

### [Cyanotoxins at low doses induce apoptosis and inflammatory effects in murine brain cells: Potential implications for neurodegenerative diseases](#)

Larissa Takser, Nora Benachour, Barry Husk, Hubert Cabana, Denis Gris, *Toxicology Reports*, Volume 3, 2016, Pages 180-189

### [Comparative effects of nodularin and microcystin-LR in zebrafish: 2.Uptake and molecular effects in eleuthero-embryos and adult liver with focus on endoplasmic reticulum stress](#)

Susanne Faltermanna, Verena Grundlerb, Karl Gademannb, Jakob Perenthalerc, Karl Fenta. *Aquatic Toxicology* Vol. 171, 2016, 77-87

### [Fast, rugged and sensitive ultra high pressure liquid chromatography tandem mass spectrometry method for analysis of cyanotoxins in raw water and drinking water—First findings of anatoxins, cylindrospermopsins and microcystin variants in Swedish source waters and infiltration ponds](#)

Heidi Pekar, Erik Westerberg, Oscar Bruno, Ants Lääne, Kenneth M. Persson, L.Fredrik Sundström, Anna-Maria Thim, *Journal of Chromatography A*, Vol. 1429, 15 January 2016, 265-276

### [Influence of captopril on the cellular uptake and toxic potential of microcystin-LR in non-hepatic adhesive cell lines](#)

Ivanka Teneva, Dorota Klaczkowska, Tsvetelina Batsalova, Zhivka Kostova, Balik Dzhambazov. *Toxicon* 111. 2016 50-57

## Useful Resources

- ✓ [EPA's CyanoHABs Website](#)
- ✓ [Models to Forecast Freshwater Algal and Cyanobacterial Blooms](#)
- ✓ [National Underwater Autonomous Glider Network](#)

## HEALTH ADVISORIES AND POSTINGS

[Oregon](#) – South Umpqua River and Lawson Bar

[Florida](#) – *Karenia Brevis* red tide, Banana River and Indian River Brown Tide bloom



To sign up for the newsletter, send an email to [danlada.lesley@epa.gov](mailto:danlada.lesley@epa.gov)