

Greenlist Bulletin

From the Toxics Use Reduction Institute
at the University of Massachusetts Lowell

March 27, 2015

In This Issue

New Review from TEDX: Common substitutes for bisphenol A (BPA) are hormonally active

TSCA Reform: Senate Committee Holds Hearing on Frank R. Lautenberg Chemical Safety for the 21st Century Act

Figuring Out Fracking Wastewater

Risk Assessment for Paint Removal Chemical Released

Evaluation kicks off for 48 substances in 2015

EPA Proposes Reporting and Record Keeping Requirements on Nanoscale Materials in the Marketplace

Health Agency Says Widely Used Herbicide Likely Carcinogenic

EPA Proposes Mass. Hazardous Waste Site to Superfund's National Priorities List

Toxicity and Accumulation of Cu and ZnO Nanoparticles in *Daphnia magna*

Researchers aim to broaden understanding of how toxins affect the body

[Join Our Mailing List!](#)

Quick Links

[Greenlist Bulletin Archives](#)

[TURI Website](#)



Like us on Facebook

This is the bi-weekly bulletin of the TURI Library at the University of Massachusetts Lowell. Greenlist Bulletin provides previews of recent publications and websites relevant to reducing the use of toxic chemicals by industries, businesses, communities, individuals and government. You are welcome to send a message to mary@turi.org if you would like more information on any of the articles listed here, or if this email is not displaying properly.



New Review from TEDX: Common substitutes for bisphenol A (BPA) are hormonally active

[Source: The Endocrine Disruption Exchange, March 16, 2015](#)

In a systematic review published [today] in *Environmental Health Perspectives*, TEDX researchers Johanna Rochester and Ashley Bolden found that bisphenol S and bisphenol F, two common BPA substitutes, have estrogen, androgen and other hormonal activity, with potencies similar to BPA. Further, BPS was just as potent as natural estrogen (i.e., estradiol) in pathways important for cell growth, cell development, and cell death.

This peer-reviewed publication supports the claim that chemical replacements should be tested for safety before being placed on the market to avoid the problem of "regrettable substitutes." It has taken years, and millions of dollars, to accumulate the body of literature on the detrimental effects of BPA. Instead of repeating this process for BPS and BPF, effort could be better spent designing and manufacturing chemical substitutes without hormonal activity. Further, regulatory action to reduce BPA exposure should encompass BPF, BPS, and possibly other BPA analogues. Importantly, consumers should know that products labeled "BPA-free" could contain unsafe substitutes.

[Read more...](#)

See original article in *Environmental Health Perspectives*, "[Bisphenol S and F: A Systematic Review and Comparison of the Hormonal Activity of Bisphenol A Substitutes](#)".

[Source: Bergeson & Campbell PC, March 19, 2015](#)

On March 18, 2015, the Senate Environment and Public Works Committee held a hearing on the Frank R. Lautenberg Chemical Safety for the 21st Century Act (S. 697). A detailed analysis of S. 697 is available in [our] March 13, 2015, memorandum. There were a number of references to the late Senator Frank R. Lautenberg (D-NJ), who introduced several bills intended to reform the Toxic Substances Control Act (TSCA), and whether the current bill would accomplish his goals. Throughout the hearing, there were many comments regarding allowing the perfect to be the enemy of the good. Supporters of S. 697 maintain that it significantly improves TSCA, providing more authority and funding to the U.S. Environmental Protection Agency (EPA) to regulate new and existing chemicals. Critics of the bill argue that while the perfect may be the enemy of the good, S. 697 is not a good bill.

[Read more...](#)

See links to the bills, Frank R. Lautenberg Chemical Safety for the 21st Century Act, [S. 697](#) and Alan Reinstein and Trevor Schaefer Toxic Chemical Protection Act, [S.725](#).

See a [press release](#) from the MA Attorney General, Maura Healey. Also see a [letter](#) from AG Healey to Senator Markey.

See [interactive maps](#) on current state chemicals activity from the Center for Effective Government.

TURI's Note: The feature article has links to testimonies offered by various organizations.

Figuring Out Fracking Wastewater

[Source: Chemical & Engineering News, March 16, 2015](#)

Author: Celia Henry Arnaud

Almost 3 million gallons of concentrated salt water leaked in early January from a ruptured pipeline at a natural gas drilling site near Williston, N.D. The brine, a by-product of the oil and gas extraction method known as hydraulic fracturing, spilled into two creeks that empty into the Missouri River, according to news reports. Although a state health official said the salty water was quickly diluted once it reached the Missouri, the spill -- large by North Dakota standards -- raised questions about the contents of the brine.

Accidental spills like this one occur with some frequency, so scientists would like to understand the contaminants they release into waterways and elsewhere in the environment. Their findings could help officials guide the cleanup of sites or mitigate damage.

For every well they drill, fracking operators pump 3 million to 5 million gal of water thousands of feet underground. There, the water opens fissures in the rock, allowing natural gas and oil to seep out of shale geologic formations. The water gets mixed with additives such as sand and surfactants to form fracking fluid, which is used to optimize the amount of fuel extracted.

[Read more...](#)

Also see from *Environmental Leader*, "[Fracking Rule Requires Chemical Disclosure](#)".

Risk Assessment for Paint Removal Chemical Released

[Source: Environmental Leader, March 25, 2015](#)

The EPA has released the final risk assessment for N-Methylpyrrolidone (NMP), a chemical commonly used to remove paint and other coatings.

The assessment identified risks to pregnant women and women of childbearing age, who have high exposure to NMP through paint or other coating removal.

Acute and chronic risks identified for women of childbearing age who use NMP for less than four hours per day may be reduced by use of specific types of chemical-resistant gloves. However, gloves and respirators do not adequately reduce risks to women of childbearing age who use NMP for more than four hours per day on a single day or repeatedly over a succession of days, the agency says.

[Read more...](#)

See press release from U.S. EPA, "[EPA Releases Final Risk Assessment for Chemical used for Paint and Coating Removal](#)". Access final risk assessment for NMP [here](#).

Evaluation kicks off for 48 substances in 2015

[Source: European Chemicals Agency, March 17, 2015](#)

ECHA has adopted the Community rolling action plan (CoRAP) for 2015-2017 with 134 substances to be evaluated. Registrants of these substances are encouraged to coordinate their actions and to have early interactions with the evaluating Member States. ...

Helsinki, 17 March 2015 -- Based on a favourable opinion of the Member State Committee, ECHA has adopted the final CoRAP for 2015-2017. The draft proposal has been available on ECHA's website since 30 October 2014. 21 Member States will carry out substance evaluation in the coming three years for 66 newly selected substances and 68 substances from the previous CoRAP update. From today, the Member States have 12 months to evaluate the 48 substances specified for 2015. In addition to the initial grounds for concern, other concerns on the substance may be identified and addressed during the evaluation. Where necessary, the evaluating Member State will prepare a draft decision for requesting further information to clarify the suspected risks.

[Read more...](#)

Also see [CoRAP 2015-2017 list](#).

EPA Proposes Reporting and Record Keeping Requirements on Nanoscale Materials in the Marketplace

[Source: U.S. Environmental Protection Agency, March 25, 2015](#)

For the first time the agency will use TSCA authority to collect health and safety information on nanoscale chemicals already in use.

WASHINGTON D.C., -- The U.S. Environmental Protection Agency (EPA) is proposing one-time reporting and recordkeeping requirements on nanoscale chemical substances in the marketplace.

"Nanotechnology holds great promise for improving products, from TVs and vehicles to batteries and solar panels," said Jim Jones, EPA's Assistant Administrator for Chemical Safety and Pollution Prevention. "We want to continue to facilitate the trend toward this important technology. [Today's] action will ensure that EPA also has information on nano-sized versions of chemicals that are already in the marketplace."

EPA currently reviews new chemical substances manufactured or processed as nanomaterials prior to introduction into the marketplace to ensure that they are safe. For the first time, the agency is proposing to use TSCA to collect existing exposure and health and safety information on chemicals currently in the marketplace when manufactured or processed as nanoscale materials. The proposal will require one-time reporting from companies that manufacture or process chemical substances as nanoscale materials.

[Read more...](#)

See U.S. EPA's web page on "[Control of Nanoscale Materials under the Toxic Substances Control Act](#)", and the proposed rule, "[Chemical Substances When Manufactured or Processed as Nanoscale Materials; TSCA Reporting and Recordkeeping Requirements](#)".

Health Agency Says Widely Used Herbicide Likely Carcinogenic

[Source: The Wall Street Journal, March 20, 2015](#)

Author: Jacob Bunge

Glyphosate, a herbicide widely marketed by Monsanto Co. and other companies, likely has the potential to cause cancer in humans, a World Health Organization agency said Friday.

The determination, published by researchers for the International Agency for Research on Cancer in a U.K. medical journal, is likely to fuel further debate over the safety of the heavily used agricultural

chemical, which Monsanto sells under the Roundup brand.

Consumer and environmental groups have long warned of health problems that they say could arise from applying the weedkiller on farms, while agricultural companies have touted the product's safety and environmental impact as preferable to other, harsher chemicals. Officials at Monsanto and agricultural-chemical trade groups contested Friday's finding, saying decades of research had proved glyphosate's safety.

[Read more...](#)

See [press release](#) from International Agency for Research on Cancer.

Also see article in *The Lancet Oncology*, "[Carcinogenicity of tetrachlorvinphos, parathion, malathion, diazinon, and glyphosate](#)".

EPA Proposes Mass. Hazardous Waste Site to Superfund's National Priorities List

[Source: U.S. Environmental Protection Agency, March 24, 2015](#)

BOSTON -- The U.S. Environmental Protection Agency (EPA) has proposed a Franklin, Mass. hazardous waste site to the National Priorities List (NPL) of Superfund sites. The Superfund program, a federal program established by Congress in 1980, investigates and cleans up the most complex, uncontrolled or abandoned hazardous waste sites in the country and converts them into productive local resources by eliminating or reducing health risks and environmental contamination associated with hazardous waste sites.

The BJAT LLC Site, located in Franklin, Mass., formerly operated as many different manufacturing operations including rubber and plastic products. The Site has not been active since 1985, but it does have residual contamination existing at the property from former industrial operations at the Site. The Site is primarily contaminated with heavy metals in the soil, groundwater and wetland areas around the site.

[Read more...](#)

Toxicity and Accumulation of Cu and ZnO Nanoparticles in *Daphnia magna*

[Source: *Environmental Science & Technology*, March 18, 2015](#)

Authors: Yinlong Xiao, Martina G. Vijver, Guangchao Chen, and Willie J. G. M. Peijnenburg

There is increasing recognition that the wide use of nanoparticles, such as Cu (CuNPs) and ZnO nanoparticles (ZnONPs), may pose risks to the environment. Currently there is insufficient insight in the contribution of metal-based nanoparticles and their dissolved ions to the overall toxicity and accumulation. To fill in this gap, we combined the fate assessment of CuNPs and ZnONPs in aquatic test media with the assessment of toxicity and accumulation of ions and particles present in the suspensions. It was found that at the LC50 level of *Daphnia magna* exposed to the nanoparticle suspensions, the relative contributions of ions released from CuNPs and ZnONPs to toxicity were around 26% and 31%, respectively, indicating that particles rather than the dissolved ions were the major source of toxicity. It was additionally found that at the low exposure concentrations of CuNPs and ZnONPs (below 0.05 and 0.5 mg/L, respectively) the dissolved ions were predominantly accumulated, whereas at the high exposure concentrations (above 0.1 mg/L and 1 mg/L, respectively), particles rather than the released ions played a dominant role in the accumulation process. Our results thus suggest that consideration on the contribution of dissolved ions to nanoparticle toxicity needs to be interpreted with care.

[Read more...](#)

Researchers aim to broaden understanding of how toxins affect the body

[Source: University of Wisconsin-Madison, March 25, 2015](#)

Author: Renee Meiller

Even in an era in which there is increased emphasis on living "green," humans are constantly exposed to a wide range of toxins in everything from our air, food and water to the goods we buy.


And while we know the harmful effects of such substances as phthalates, VOCs, asbestos, lead and others, there are tens of thousands of toxins present in our environment for which that information

is yet unknown.

"To date, we do not have a good understanding of how environmental chemicals might influence human tissues," says William Murphy, the Harvey D. Spangler Professor of Biomedical Engineering in the Department of Orthopedics and Rehabilitation at the University of Wisconsin-Madison. ...

Researchers in the H-MAPs Center will focus on toxin screening in the liver, neural and vascular systems, as well as the role of chemicals in breast cancer. They will use a suite of innovative technologies to assemble and use these models in a fast-paced, automated fashion that meets real-world needs.

[Read more...](#)



Please send a message to mary@turi.org if you would like more information on any of these resources. Also, please tell us what topics you are particularly interested in monitoring, and who else should see Greenlist. An online search of the TURI Library catalog can be done at <http://library.turi.org> for greater topic coverage.

Greenlist Bulletin is compiled by:

Mary Butow
Research and Reference Specialist
Toxics Use Reduction Institute
University of Massachusetts Lowell
600 Suffolk St., Wannalancit Mills
Lowell MA 01854-2866
978-934-4365
978-934-3050 (fax)
mary@turi.org