Greenlist BULLETIN

TURI TOXICS USE REDUCTION INSTITUTE UMASS LOWELL

Toxics Use Reduction Institute April 4, 2016

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.

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Antimicrobials in Hospital Furnishings: Do They Help Reduce Healthcare-Associated Infections?

Source: Health Care Without Harm, March 2016
Author: Ted Schettler

Healthcare-associated infections (HAIs) have been part of health care delivery since antiquity and are major causes of morbidity and mortality today. Attention to building design, operations, hand washing, cleaning, disinfection, and surveillance are proven methods for preventing and controlling HAIs. Yet, strict adherence to guidelines is challenging, and many hospital administrators and infection preventionists ask, "What more can we do? What can we add?"

This report explores the benefits, risks, tradeoffs, and cost implications of adding antimicrobials to hospital furnishings.

Read more...

Access report here.

Getting chemicals out of health care settings, with a little help

Source: GreenBiz.com, April 1, 2016

Author: Amanda Cattermole

The Hippocratic Oath declares that disease should be prevented whenever possible because prevention is preferable to cure.

Furthering this oath, the Healthier Hospitals Initiative (HHI), a program involving more than 1,300 hospitals and health care centers in the United States and Canada, has developed a safer chemicals program as part of its broader sustainability mission.

U.S. health care spending accounted for nearly 18 percent of GDP in 2014. The health care sector's immense purchasing power is effectively tipping the marketplace in favor of suppliers adopting safer chemicals policies and practices.

Read more...

Food companies move away from potentially toxic chemicals in cans

Source: *The Guardian*, March 31, 2016
Author: Alison Moodie

Major food companies are still coating the lining of their metal food cans with Bisphenol A (BPA), a chemical that has been linked to serious health problems like cancer, infertility and obesity, according to a new study.

The study, conducted by a group of nonprofit organizations including the Breast Cancer Fund and Ecology Center, tested nearly 200 cans from food giants such as Campbell Soup Company, Del Monte and General Mills. Two out of three cans had the additive in their lining, according to the authors.

All of the 15 Campbell Soup cans tested contained BPA, while more than half of the Del Monte and General Mills cans tested positive for the chemical. BPA was also found in the majority of private-label canned goods tested at national grocery chains Kroger and Albertsons, and at big box retailers such as Target and Walmart.

Read more...

See study, "BPA Buyer Beware: Toxic BPA and regrettable substitutes found in the linings of canned food".

See March 24, 2016 article from Center for Environmental Health, "Watchdog Groups Condemn CalEPA Proposal on BPA in Food".

Also see April 1, 2016 notice from California Office of Environmental Health Hazard Assessment, "Notice of Emergency Action to Amend Section 25603.3 Title 27, California Code of Regulations Warnings For Exposures to Bisphenol A From Canned and Bottled Foods and Beverages".

Washington state finds alternative BFRs in fish

Source: *Chemical Watch*, March 31, 2016

Washington State's Ecology Department has identified "alternative" brominated flame retardants in 89% of freshwater fish, sampled from rivers and lakes across the state.

Department scientists measured levels of the flame retardants (BFRs), alkylphenolic compounds, and hexabromocyclododecane (HBCD) in fish samples collected in 2014. All of them contained PBDEs, which were also present at the highest concentrations,

followed by alkylphenolic compounds, then HBCD and non-BDE flame retardants.

Read more...

See full report from Washington State Department of Ecology, "Brominated Flame Retardants, Alkylphenolic Compounds, and Hexabromocyclododecane in Freshwater Fish of Washington State Rivers and Lakes".

See from The Alliance for a Healthy Tomorrow, "Boston changes fire code to allow furniture free of flame retardants in public spaces".

Also see from *Environmental Science & Technology*, "Measuring Personal Exposure to Organophosphate Flame Retardants Using Silicone Wristbands and Hand Wipes".

Nonisocyanate Biobased Poly(ester urethanes) with Tunable Properties Synthesized via an Environment-Friendly Route

Source: *ACS Sustainable Chemistry & Engineering*, March 27, 2016
Authors: Zhao Wang, Xing Zhang, Liqun Zhang, Tianwei Tan, and Hao Fong

The objective of this study was to explore an environment-friendly route to synthesize nonisocyanate based poly(ester urethanes) of poly(1,10-bis(hydroxyethyloxycarbonylamino) decane-co-dicarboxylic acid) (PBDA) from renewable materials/resources. ... The results indicated that the PBDAs possessed reasonably good properties and thus could potentially be used for engineering applications; moreover, because their macromolecular chains/backbones contained ester and urethane groups (which would usually result in excellent cytocompatibility), it was envisioned that these PBDAs might also be suitable for some biological and/or biomedical applications.

Read more...

EPA targets hydrofluorocarbons

Source: *Chemical & Engineering News*, April 1, 2016
Author: Cheryl Hogue

The Environmental Protection Agency is clearing the way for additional chemicals to replace hydrofluorocarbons (HFCs), potent greenhouse gases that are used as refrigerants.

An EPA proposal released in late March "would reduce the use and emissions of some of the most harmful HFCs, which are thousands of times more potent than carbon dioxide," in terms of their global warming potential, says agency Administrator Gina McCarthy. As part of its effort to combat human-caused climate change, the Obama Administration is promoting a global phaseout of HFCs.

EPA's proposal would also allow use of safer, more climate-friendly alternatives to HFCs. For instance, it would clear the way for more uses of hydrofluoroolefin-1234yf, a substance gaining popularity in automobile air conditioners as an alternative for HFC-134a. HFO-1234yf has less than one thousandth of the global warming potential of HFC-134a. The proposal would allow use of the HFO-1234yf in heavy-duty pickup trucks and vans sold in the U.S.

EPA's proposal would halt the use of HFCs and methylene chloride for blowing plastic into certain types of closed-cell foams. The move is intended to dissuade companies from considering methylene chloride as an alternative when they switch away from HFCs, the agency says.

Read more...

CHC Publishes First Guidebook On Community-based Air Quality Testing

Source: Citizens for a Healthy Community, February 2016
Authors: Natasha Leger, Jim Ramey, and Kim Schultz

...Air pollution from chemicals associated with oil and gas development causes such health effects as burning eyes, dizziness, and nausea, as well as potential development of chronic diseases including damage to cardiovascular or endocrine systems. To prove that such damages are caused by oil and gas operators, and to counter industry and government arguments that such development does not unduly harm people and the environment, evidence and data are needed. ...

CHC partnered with TEDX, The Endocrine Disruption Exchange, to conduct a community-based air quality sampling study. CHC conducted one of the most comprehensive test of chemicals associated with oil and gas development. We tested for a total of 74 chemicals known to have adverse impacts on human health.

Read more...

See February 2016 CHC report, "How Oil & Gas Impacted Communities Can Test Air Quality On A Small Budget: A Step-By-Step Guidebook Based On The North Fork Valley Air Sampling Program".

Urgent research needed into risks from nanomaterials in household waste, according to OECD

Source: SafeNano, March 1, 2016

Urgent research is needed to assess the possible risks to human health and ecosystems from the ever-increasing amounts of engineered nanomaterials going into household waste and ending up in the environment, according to a new OECD report.

"Nanomaterials in Waste Streams: Current Knowledge on Risks and Impacts" says engineered nanomaterials are entering landfill sites, incinerators, and wastewater treatment facilities that are not designed to filter out such small particles. Nanoparticles are thus ending up in sewerage sludge used as agricultural fertiliser and in sewage plant effluent that flows into rivers and lakes, as well as in recycled goods.

Read more...

See OECD report, "Nanomaterials in Waste Streams: Current Knowledge on Risks and Impacts".

Unexamined Endocrine Disruption? Pesticides Inhibit Prostaglandin Activity

Source: *Environmental Health Perspectives*, April 2016
Author: Lindsey Konkel

Androgens are widely recognized as important drivers of male sexual development in the fetus. Some endocrine-disrupting chemicals have been shown to impact male sexual differentiation by affecting androgen production or blocking androgen receptors in target tissues. Comparatively little attention has been paid to the role that ubiquitous biologically

active lipids called prostaglandins play in these developmental processes, although studies have found that prostaglandins help initiate male genital development. In this issue of *EHP*, researchers show that several structurally different endocrine-active pesticides suppress prostaglandin synthesis and signaling in mouse cells.

"The research provides support for a new modality of endocrine disruption via prostaglandin inhibition," says senior study author Andreas Kortenkamp, a toxicologist at Brunel University in London. This study is thought to be the first to test pesticides for these effects.

Read more...

See original study in *EHP*, "Effects of Common Pesticides on Prostaglandin D2 (PGD2) Inhibition in SC5 Mouse Sertoli Cells, Evidence of Binding at the COX-2 Active Site, and Implications for Endocrine Disruption".

GUEST COMMENTARY: Taking a look at Article 47 [synthetic turf]

Source: *The Concord Journal*, March 27, 2016
Author: Debbie Barr

It ultimately took two U.S. senators, four congressmen and the White House to respond to public concern that swept across the country about the environmental impact and safety of artificial turf playing fields. Scattered and inconclusive research had confused and subverted the ability of local officials to protect children, adults and the environment. ...

- In November 2015, ten questions about Artificial Turf were sent to Gina McCarthy, EPA director by members of the house energy and commerce committee.

- Senators Bill Nelson and Richard Blumenthal of the Consumer Protection and Product Safety Committee followed up with a similar letter to Elliot Kaye, chairman, Consumer Product Safety Commission and also requested assistance from President Obama.

- On Feb. 9, the White House directed the EPA, Centers for Disease Control/ Agency for Toxic Substances Disease Registry and the Consumer Product Safety Commission to undertake a multi-agency Federal Research Action Plan into the rubber surfaces that could be linked to health and environmental impact of carcinogenic materials and exposure over time.

Read more...

See a summary of meeting materials from California's OEHHA Synthetic Turf Scientific Advisory Panel Meeting, February 8, 2016, Synthetic Turf Study.

TURI's Note: See our library guide on Artificial Turf.

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