

Greenlist Bulletin

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at the University of Massachusetts Lowell

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This is the 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.



Study finds high exposure to food-borne toxins

[Source: University of California - Davis, November 13, 2012](#)

SACRAMENTO, CA – In a sobering study published in the journal *Environmental Health*, researchers at UC Davis and UCLA measured food-borne toxin exposure in children and adults by pinpointing foods with high levels of toxic compounds and determining how much of these foods were consumed. The researchers found that family members in the study, and preschool children in particular, are at high risk for exposure to arsenic, dieldrin, DDE (a DDT metabolite), dioxins and acrylamide. These compounds have been linked to cancer, developmental disabilities, birth defects and other conditions. However, the study also points to dietary modifications that could mitigate risk.

"Contaminants get into our food in a variety of ways," said study principal investigator Irva Hertz-Picciotto, professor and chief of the Division of Environmental and Occupational Health at UC Davis. "They can be chemicals that have nothing to do with the food or byproducts from processing. We wanted to understand the dietary pathway pesticides, metals and other toxins take to get into the body."

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Read original article in *Environmental Health*: ["Cancer and non-cancer health effects from food contaminant exposures for children and adults in California: a risk assessment."](#)

Triclosan in cosmetics and personal care products can increase allergy risk

[Source: Norwegian Institute of Public Health, November 14, 2012](#)

Triclosan - an antibacterial chemical found in toothpaste and other products - can contribute to an increased risk of allergy development in children. This comes from the Norwegian Environment and Childhood Asthma Study, in which the Norwegian Institute of Public Health is involved.

Similar results are reported in the USA.

Triclosan has been in use for decades, but was recently associated with allergies in children in an American study, the National Health and Nutrition Examination Survey (NHANES). The new Norwegian study found similar associations between allergies and triclosan levels measured in children's urine.

The study found that triclosan levels measured in urine were associated with elevated levels of Immunoglobulin E (IgE) and rhinitis (blocked nose/hay fever) in 10 year-olds.

623 urine samples were collected and measured at the Center for Disease Control and Prevention in Atlanta, USA. Approximately 50 per cent of the Norwegian children had detectable levels of triclosan, while 80 per cent of American children had measurable levels. The children had approximately the same amount of triclosan exposure.

Triclosan can change the bacterial flora on the skin, in the mouth and in the intestines. A change in the bacterial composition of "good" bacteria can cause an increased risk of developing allergies (hygiene hypothesis). Therefore, increased use of triclosan and antibacterial products has generally been associated with an increased incidence of allergies.

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Airborne particles smuggle pollutants to far reaches of globe

[Source: Pacific Northwest National Laboratory, November 15, 2012](#)

Author: Mary Beckman

RICHLAND, WA. – Pollution from fossil fuel burning and forest fires reaches all the way to the Arctic, even though it should decay long before it travels that far. Now, lab research can explain how pollution makes its lofty journey: rather than ride on the surface of airborne particles, pollutants snuggle inside, protected from the elements on the way. The results will help scientists improve atmospheric air-quality and pollution transport models.

The results also show that the particles that envelop pollutants also benefit from this arrangement. The new study in *Environmental Science & Technology* shows that the airborne particles, made from natural molecules mostly given off by live or burning plants, last longer with a touch of pollutant packed inside. The pollutants are known as polycyclic aromatic hydrocarbons, or PAHs, and are regulated by environmental agencies due to their toxicity.

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Read original article in *Environmental Science & Technology*: ["Synergy between Secondary Organic Aerosols and Long-Range Transport of Polycyclic Aromatic Hydrocarbons."](#)

Researchers have made the production of batteries cheaper and safer

[Source: Aalto University, November 14, 2012](#)

Researchers at Aalto University, Finland have developed a method for producing lithium batteries that is cheaper and more environmentally friendly than previously used methods. This new process has succeeded in replacing the harmful methylpyrrolidone (NMP) solvent, which is traditionally used in the manufacturing of electrodes, with water.

Removing this harmful solvent from the production process makes the production of batteries simpler and safer for employees. Production costs of batteries can be decreased by as much as 5 percent. Some of this savings comes from the reduced cost of transporting and recycling harmful chemicals and a lower risk of exposure to employees.

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Read original article in *Journal of Power Sources*: ["Water soluble binder for fabrication of Li₄Ti₅O₁₂ electrodes."](#)

PCBs, other pollutants may play role in pregnancy delay

[Source: National Institute of Child Health & Human Development, November 14, 2012](#)

Couples with high levels of PCBs and similar environmental pollutants take longer to achieve pregnancy in comparison to other couples with lower levels of the pollutants, according to a preliminary study by researchers at the National Institutes of Health and other institutions.

PCBs (polychlorinated biphenyls) are chemicals that have been used as coolants and lubricants in electrical equipment. They are part of a category of chemicals known as persistent organochlorine pollutants and include industrial chemicals and chemical byproducts as well as pesticides. In many cases, the compounds are present in soil, water, and in the food chain. The compounds are resistant to decay, and may persist in the environment for decades. Some, known as persistent lipophilic organochlorine pollutants, accumulate in fatty tissues. Another type, called perfluorochemicals, are used in clothing, furniture, adhesives, food packaging, heat-resistant non-stick cooking surfaces, and the insulation of electrical wire.

Exposure to these pollutants is known to have a number of effects on human health, but their effects on human fertility – and the likelihood of couples achieving pregnancy – have not been extensively studied.

"Our findings suggest that persistent organochlorine pollutants may play a role in pregnancy delay," said the study's first author, Germaine Buck Louis, Ph.D., director of the Division of Epidemiology, Statistics, and Prevention Research at the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) at NIH.

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Read original article from *Environmental Health Perspectives*: ["Persistent Environmental Pollutants and Couple Fecundity: The LIFE Study."](#)

Fracking Chemical Database

[Source: SkyTruth, November 2012](#)

SkyTruth maintains a database of chemicals that were reported by oil and gas drilling operators as being used in hydraulic fracturing operations. The database contains records for more than 27,000 frack operations from January 2011 through August 2012 in 24 US states.

SkyTruth believes that information like this should be freely available to the public for educational and research purposes, so [they] are making the entire database available online for anyone that wants to download it.

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Pollution prevention internships find lost value, launch new careers

[Source: GreenBiz.com, November 13, 2012](#)

Author: Marie Steinwachs

Finding the time and resources to meet a company's sustainability goals can present real challenges. Facility managers and engineers often know that improved environmental efficiency could reduce operating costs, but don't have time to analyze and prioritize which investments will offer the best return. Other times, the problems have been overlooked for so long that they're assumed to be part of the fixed cost of doing business. The missed opportunities to reduce operations costs mean lower profits, which further limit the company's ability to invest in sustainable strategies.

Getting started in a sustainability career is not so easy either. Although there is a shortage of engineers and environmental managers as the skilled labor force nears retirement, the market is not wide open for graduating students in these fields. Many students are leaving college with high marks and large debts, and finding that companies are downsizing, holding steady or looking for experienced workers. Some of the brightest new talent can't get a foothold on the sustainability career ladder.

One possible solution for both these problems are pollution prevention (P2) internship programs, which have been matching students' need for experience and companies' sustainability efforts for more than a decade. Growing interest in the P2 internship programs -- and the sheer number of new programs springing up around the U.S. -- attest to their value, which is also documented and reported to a national database. To date, hundreds of students have completed P2 internships, and their accumulated annual savings for businesses now measures in billions of dollars.

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Small is beautiful: Polling shows huge bipartisan support for TSCA reform among small business owners

[Source: Environmental Defense Fund, November 16, 2012](#)


Author: Alissa Sasso

This week, the American Sustainable Business Council released the results of a bipartisan national survey of 511 small business owners conducted by Lake Research Partners and Public Opinion Strategies. The survey showed that small business owners, just like voters, support stronger chemical safety regulations to mitigate the risks posed to human health and the environment by toxic chemicals.

Small business owners are an important part of the discussion on TSCA reform; the chemical industry frequently uses this group as an excuse to oppose tighter regulations, claiming that these regulations are "bad for business" and would detrimentally harm small business owners. In contrast, the survey shows that there is broad consensus among small business owners on the need to ensure the safety of their products and their customers.

Especially encouraging is that 73% of small business owners are in favor of TSCA reform similar to that provided in the Safe Chemicals Act of 2011: chemical manufacturers would be required to prove a chemical is safe in order to use it; EPA would have the ability to limit or ban uses of a dangerous chemical; and incentives would be provided to support for innovation towards safer chemicals. On top of this, specific aspects of the Act's reforms garnered support as high as 90% of those surveyed, results which held across party affiliations.

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Greenlist Bulletin is compiled by:

Mary Butow
TURA Program Research Assistant
Toxics Use Reduction Institute
University of Massachusetts Lowell
600 Suffolk St., Woburn Millis
Lowell MA 01854
978-934-4365
978-934-3050 (fax)
mary@turi.org

