

Greenlist Bulletin

From the Toxics Use Reduction Institute
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.



Pets share our environment and our diseases; doctors and vets investigating risks

[Source: *Environmental Health News*, September 25, 2012](#)

Author: Lindsey Konkel

When Janet Riordan returned home from a vacation, she expected a storm of tail wagging and barking from her 7-year-old golden retriever, Reggie. The moment she saw him, she knew something was wrong. "He came to me in my arms and appeared to be sobbing. I had never seen an animal behave like that," said Riordan, who lives in a suburb of Milwaukee, Wis. A veterinarian confirmed her fears: Reggie had an aggressive form of lymphoma. Riordan knew the toll that lymphoma could take. Four years earlier her father died of it. "It was devastating," Riordan said. "I never thought I would lose my dad and my dog to the same disease." Pet owners share their homes, their exercise habits and sometimes even their food with their four-legged companions. And increasingly, they are sharing the same diseases: Dogs and cats suffer from obesity, diabetes, heart disease, cancer, thyroid disorders and asthma, just like humans. Now researchers are examining the role that pollutants and other environmental factors may play in these dual diseases. Doctors and veterinarians have begun to work together to investigate common risk factors, such as pesticides, air pollutants, cigarette smoke and household chemicals.

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Nano-safety studies urged in China

[Source: *Nature*, September 18, 2012](#)

Author: Jane Qiu

Here is a recipe for anxiety: take China's poorly enforced chemical-safety regulations, add its tainted record on product safety and stir in the uncertain risks of a booming nanotechnology industry.

As an antidote to this uneasy mixture, the country should carry out more-extensive safety studies and improve regulatory oversight of synthetic nanomaterials, leading Chinese researchers said at the 6th International Conference on Nanotoxicology in Beijing this month. "This is the only way to maintain the competitiveness of China's nanotechnology sector," says Zhao Yuliang, deputy director of the Chinese Academy of Sciences' National Center for Nanoscience and Technology (NCNST) in Beijing. "We certainly don't want safety issues to become a trade barrier for nano-based products."

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Date palm juice: A potential new "green" anti-corrosion agent for aerospace industry

[Source: American Chemical Society, September 26, 2012](#)

The search for a "greener" way to prevent corrosion on the kind of aluminum used in jetliners, cars and other products has led scientists to an unlikely source, according to a report in ACS' journal *Industrial & Engineering Chemistry Research*. It's the juice of the date palm - those tall, majestic trees that, until now, were noted mainly as sources of food and traditional medicines.

Husnu Gerengi points out that strong, lightweight aluminum alloys are used to make planes, cars and industrial equipment. Aluminum corrodes when exposed to air, but unlike rusting steel, the corrosion of aluminum's surface layer forms a protective film that prevents degradation of the underlying metal. However, that film breaks down in some harsh environments, like seawater, leaving the metal vulnerable. Engineers have developed coatings to protect aluminum in these applications, but many of these use potentially toxic chemicals. Previous research suggested that extracts of date palm leaves had an anti-corrosion effect. Gerengi decided to check date palm juice.

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Read original research article: "[Anti-Corrosive Properties of Date Palm \(Phoenix dactylifera L.\) Fruit Juice on 7075 Type Aluminium Alloy in 3.5% NaCl Solution](#)" found in *Industrial & Engineering Chemistry Research*.

WA DoE Children's Safe Products Act (CSPA) Data Available

[Source: Washington State Department of Ecology](#)

Ecology's Reducing Toxic Threats Initiative is based on the principle that preventing exposures to toxics is the smartest, cheapest and healthiest way to protect people and the environment. The Children's Safe Product Act (CSPA - Chapter 70.240 RCW) is an important part of this initiative.

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The second part of the CSPA requires Ecology, in consultation with the Department of Health, to develop a list of chemicals that manufacturers must report on. This list is called the Reporting List of Chemicals of High Concern to Children. As required by the law, chemicals on the list are toxic and have either been found in children's products or have been documented to be present in human tissue (blood, breast milk, etc.). ...

Beginning in August 2012, manufacturers of children's products must report to Ecology if their products contain these chemicals.

Click [here](#) to search data on children's products.

Green chemistry: Cancer research yields nylon?

[Source: Los Angeles Times, September 24, 2012](#)

Author: Eryn Brown

Cancer researchers at Duke University Medical Center in Durham, N.C., have been studying the DNA in tumors called glioblastomas - hoping, ultimately, to help find a cure for the disease.

They haven't found that yet, but they may have come across something else scientists are seeking: an enzyme that could help companies make nylon without depending on fossil fuels.

Duke researcher Zachary Reitman and colleagues reported Sunday in the journal *Nature Chemical Biology* that inserting glioblastoma genes into yeast allowed them to make an enzyme called 2-hydroxyadipate dehydrogenase - a molecule chemists need to make adipic acid, a key ingredient in nylon, from sugar.

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Dioxin causes disease, reproductive problems across generations

Source: [Washington State University, September 26, 2012](#)

Author: Eric Sorensen

PULLMAN, Wash. – Since the 1960s, when the defoliant Agent Orange was widely used in Vietnam, military, industry and environmental groups have debated the toxicity of one of its ingredients, the chemical dioxin, and how it should be regulated.

But even if all the dioxin were eliminated from the planet, Washington State University researchers say its legacy would live on in the way it turns genes on and off in the descendants of people exposed over the past half century.

Writing in the journal *PLoS ONE*, biologist Michael Skinner and members of his lab say dioxin administered to pregnant rats resulted in a variety of reproductive problems and disease in subsequent generations. The first generation of rats had prostate disease, polycystic ovarian disease and fewer ovarian follicles, the structures that contain eggs. To the surprise of Skinner and his colleagues, the third generation had even more dramatic incidences of ovarian disease and, in males, kidney disease.

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Corporate Environmental Sustainability Strategy

Source: *The Journal of Corporate Citizenship*, Winter 2011, Pgs. 107-130

Authors: Richard M. Kashmanian, Richard P. Wells, & Cheryl Keenan

Many companies are looking at the need to engage further in sustainability. The paper outlines key elements of a corporate sustainability strategy and provides individual examples from various companies. The audience for this paper includes companies that are early in the sustainability process as well as companies that are interested in improving or expanding their established sustainability strategy. A corporate sustainability strategy is a multi-faceted strategy that provides multiple benefits to the company. The elements of a corporate sustainability strategy are grouped into these categories: (1) set strategic direction; (2) improve operational performance; (3) improve value chain performance; and (4) relate effectively to internal and external stakeholders.

Contact *TURI* for more information on this article.



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