

RESEARCH COMMENTARY

Bisphenol A: Researchers Question Sources of Exposure

By Suzanne Snedeker, Ph.D., Associate Director for Translational Research, BCERF

Bisphenol A, commonly known as BPA, is an environmental estrogen whose health effects, especially from early life exposures, have been hotly debated in the scientific community during the last two years. The National Toxicology Program (NTP) reviewed evidence of whether early life exposures affect various health endpoints, from breast development and possible breast cancer risk to effects on the brain and prostate, and has called for more research to clarify the uncertainties about BPA's possible health effects from current levels of exposure (NTP, 2008).

One of the main assumptions about BPA has been that the primary route of exposure to this chemical is through the diet (NTP, 2008). About 40% of the BPA in use is for epoxy resins, including linings of canned foods and beverages. The high-heat canning process results in BPA leaching from the can lining into the food or beverage. The other approximately 60% of BPA is used in the manufacturing of polycarbonate plastic. Until recently, polycarbonate was used extensively in sports and baby bottles. (In the past year, many manufacturers have voluntarily switched to using BPA-free plastics for food and beverage containers.) Putting hot foods or beverages into containers made of polycarbonate plastic, or microwaving in them, can cause low levels of BPA to leach from the plastic into the beverage or food. While polycarbonate plastics have many uses, including CDs, car headlight covers, and sports gear (from goggles to bike helmets), less is known about human exposure to these sources of BPA. Again, the primary source of exposure has been thought to be through the BPA that leaches into food or beverages from can linings or heated polycarbonate containers.

However, research from the University of Rochester and the University of Missouri-Columbia (Stahlhut et al., 2009) is questioning the assumption that diet is the exclusive source of exposure to BPA. BPA is rapidly

metabolized and is excreted from the body in the urine. The authors hypothesize that if food and beverages were the primary sources of exposure, then longer periods of fasting time (time between last food intake and urine collection) would result in lower levels of BPA excreted into the urine. In contrast, individuals with short fasting times should have higher levels of BPA in their urine. Using data from 1,469 participants in the 2003-04 National Health and Nutrition Examination Survey (NHANES), these researchers analyzed BPA excretion in urine as a function of fasting time. Surprisingly, they did not observe a rapid decline in urinary levels with increasing fasting time.

The authors suggest two alternative explanations for this finding. Perhaps there is substantial non-food exposure to BPA, or, some BPA may be stored in body fat and is slowly released. It should be stressed that this study offers these as hypothetical explanations. They do not present new data showing that BPA is stored in body fat

continued on page 2

index

The Pine River Statement:
Human Health Consequences
of DDT Use • 3

Keeping Pharmaceuticals
Out of the Water: Activities
Around New York State • 4

BCERF Brief for Teachers
Distributed to All New York
State United Teachers
(NYSUT) Regional Offices • 6

Reinstatement of State-funded
BCERF Environmental
Chemical Research and
Educational Programming • 7

or data on alternative sources of exposure. They do cite the few studies done to date that have shown some evidence of BPA being detected in body fat. They also cite a study that detected migration of BPA from water hoses made with polyvinylchloride plastic and the need to investigate this as a possible source of exposure. They call for more in-depth studies to closely examine possible alternative sources of exposure, including breathing BPA from household dust or exposure through hand-to-mouth behavior in handling items (like carbonless paper) known to contain BPA. One possible route of exposure seldom considered is BPA in household products (like CDs and DVDs) that may heat up in players or computers and possibly release BPA on the surface of the materials.

The authors note several limitations of their study, including possible bias due to the self-reporting of fasting times by the study subjects and the possibility of contamination of the urine samples. Given that the processing and analysis of the urine samples were done by the Centers for Disease Control and Prevention (CDC), possible sources of contamination were minimized. However, few details were given on the quality control procedures used by the CDC in this paper. The authors did note that field blanks (surrogate liquids that could not have BPA that are put in the same collection containers) were not collected by the CDC for the NHANES study. This and other quality control and assurance procedures should be reviewed to make sure the widely variable BPA levels in study subjects were not due to any procedures that may have resulted in the contamination of the urine samples.

There is another possible explanation to this study's results. Studies looking at how humans absorb, metabolize, and excrete BPA have been based on a small number of human subjects (only about a dozen subjects from several studies; see Völkel et al., 2002, and 2005; Tsukioka et al., 2004). These studies have indicated that ingested BPA is rapidly excreted over a very short time. Ingested BPA in humans is thought to be metabolized in the liver into a

form called BPA-glucuronide and this form is then rapidly excreted in the urine. This is in contrast to how other mammals, e.g. young rats, handle BPA (EFSA, 2007; NTP, 2008). In rats, some of the BPA-glucuronide made in the liver is excreted into the bile and then into the gastrointestinal tract, where some of it is cleaved to release "free" BPA. This free BPA is reabsorbed, while the rest is excreted in the urine as the BPA-glucuronide (ESFA, 2005). It is possible that the human studies need to reexamine BPA absorption and excretion patterns, and follow a larger number of individuals with a greater age range to see if there is any evidence that some proportion of adult humans metabolize BPA more like their young rodent counterparts. A slower elimination of BPA because of cleavage and reabsorption of free BPA would also explain why the NHANES-based study did not see a rapid fall in urinary BPA levels with long periods of fasting.

The authors point out that both the European and NTP evaluations of possible health risks from BPA have largely been based on the assumption that exposure is almost exclusively from food. The results presented in this NHANES-based study question this dogma and more studies are needed to see if another paradigm may more accurately explain whether sources of BPA exposure other than food and beverages should be determined and quantified, and if BPA may have some capacity to be stored in the body. I would also recommend that perhaps more humans studies are needed to reevaluate how BPA is absorbed, metabolized to its glucuronide form, and whether this form is entirely excreted or if some is reabsorbed as free BPA and stored in fat tissue. As always, assumptions need to be questioned, and they also need to be tested. 



This article can be found on our website at

<http://envirocancer.cornell.edu/Newsletter/articles/v14BisphenolA.cfm>

Bibliography

EFSA (European Food Safety Authority)

http://www.efsa.europa.eu/EFSA/efsa_locale-1178620753812_1178620772817.htm
(2007 report, cited May 30, 2009)

NTP, Draft NTP Brief on Bisphenol A, April 14, 2008, National Toxicology Program (http://cerhr.niehs.nih.gov/chemicals/bisphenol/BPADraftBrief_VF_04_14_08.pdf, cited May 30, 2009).

Stahlhut, R.W., Welshons, W.V., and Swan, W.H. (2009). Bisphenol A data in NHANES suggest longer than expected half-life, substantial nonfood exposure or both. *Environ. Health Perspect.* 117, 784-789.

Tsukioka, T., Terasawa, J., Sato, S., Hatayama, Y., Makino, T., and Nakazawa, H. (2004). Development of analytical method for determining trace amounts of BPA in urine samples and estimation of exposure to BPA. *J. Environ. Chem.* 14, 57-63.

Völkel, W., Bittner, N., and Dekant, W. (2005). Quantification of bisphenol A and bisphenol A glucuronide in biological samples by high performance liquid chromatography-tandem mass spectrometry. *Drug Metab. Dispos.* 33, 1748-1757.

Völkel, W., Colnot, T., Casandy, G.A., Filser, J.G., and Dekant, W. (2002). Metabolism and kinetics of bisphenol A at low doses following oral administration. *Chem. Res. Toxicol.* 15, 1281-1287.

The Pine River Statement: Human Health Consequences of DDT Use

By Suzanne Snedeker, Ph.D., Associate Director for Translational Research, BCERF

In the Spring 2008 issue of *The Ribbon*, I shared with readers my experiences attending the Eugene Kenaga International DDT Conference, where I joined other scientists and local community advocates to discuss the health effects of DDT use. My presentation was on the evidence of DDT's effects on the risk of cancer and diabetes. The conference took place at Alma College in Michigan near one of the largest Superfund sites for DDT contamination (Velsicol Chemical Corporation Plant) (see <http://envirocancer.cornell.edu/Newsletter/articles/v13DDTLegacy.cfm>).

Presenters at the conference were urged by Dr. Edward Lorenz, one of the organizers, to write a review of the health consequences of DDT exposure in humans and a consensus statement reflecting the presentations and discussions that took place in Alma. Participating students and advocates (organized as The Pine River Task Force) were concerned with the legacy of DDT's effect in their own community, as well as the consequences of the reintroduction of DDT for malaria control in Africa and other areas affected by the disease, the need for continued research on health effects in exposed populations, and the importance of seeking alternatives to DDT.

Under the leadership of Dr. Brenda Eskenazi (who presented on neurological effects of DDT exposure in children) and her colleagues from the University of California at Berkeley, those who presented at the conference collaborated over many months to develop a manuscript for publication. I am pleased to have served as a co-author and happy to tell *Ribbon* readers that the paper was

recently published this May in the scientific journal, *Environmental Health Perspectives*. This is a public access journal and the entire manuscript is available online at <http://www.ehponline.org/members/2009/11748/11748.pdf>

The authors examined nearly 500 scientific studies to develop a comprehensive and cohesive analysis of research to date on the health consequences of DDT use. The review also identifies data gaps of what we still need to know about exposure and health effects in at-risk populations, especially children and pregnant women. I co-authored the sections on the cancer risk of DDT with Dr. Barbara Cohn, and wrote the section on emerging evidence that DDT may be linked to an increased incidence of diabetes.

The review presents the entire scope of the evidence on cancer risk, discussing studies showing both positive and negative associations. For instance, while early life exposure to DDT has been linked to a higher risk of breast cancer (in a study authored by Dr. Cohn), as well as to increased risk of cancer of the liver and pancreas, DDT exposure does not appear to increase the risk of cancer of the colon, lung, bladder, prostate, uterus, or stomach.

The review highlights many other areas of health concern, including effects on spontaneous abortion, development of the nervous system in children exposed to DDT, and consequences in adult life, including decreased quality of semen in men. The paper points out the need for more research, including studies to address whether DDT exposure affects the onset of puberty and

different endpoints that characterize puberty, as well as the need to understand effects on the immune system, especially in areas that have high rates of HIV. There is still little information available on actual body burdens of DDT in malaria-endemic countries where DDT has been reintroduced (used in residual spraying of interior walls of dwellings). There is even less information on health effects of currently exposed populations, and a continuing need to monitor populations that have been exposed historically, either through direct use or environmental contamination (like the Pine River site).

Given the health consequences of DDT presented in our paper, there is not only the need to conduct more rigorous research on seeking alternatives to DDT for malaria control, but the alternatives must also be evaluated for potential adverse effects on the environment and people, especially in areas where malnutrition and HIV are endemic. For instance, there is a paucity of information on whether use of a DDT alternative, pyrethroid pesticides, has human health consequences in exposed populations. The authors recommend that malaria-plagued countries need to be assisted so they can evaluate and use other methods for reliable malaria control, and that the global community bears the responsibility to carefully monitor exposure to DDT and continue to evaluate health consequences. 

 This article can be found on our website at <http://envirocancer.cornell.edu/Newsletter/articles/v14PineRiver.cfm>

Keeping Pharmaceuticals Out of the Water: Activities Around New York State

By Carmi Orenstein, MPH, Editor

A year ago in our Spring 2008 issue we wrote about “Following the News on Pharmaceuticals in Drinking Water.” Here we offer an update on some of the efforts in New York State (NYS) to keep pharmaceuticals out of the water that have taken place since then.

NYS bill passed, public information campaign initiated

A bill that requires the New York State Department of Environmental Conservation (DEC) in cooperation with the Department of Health (DOH) to conduct an extensive public information campaign on the proper storage and disposal of prescription and over-the-counter (OTC) drugs was passed in late Fall 2008. The bill also requires the DEC to develop a notice containing proper disposal information to be displayed in every pharmacy and retail business with more than 3,000 square feet of retail space that is authorized to sell drugs. The new law authorizes DEC to establish or enter into contracts for the establishment of demonstration programs to determine the most effective methods of drug disposal. Assemblyman Steven Englebright states on his website that his original proposal (introduced on the Senate side by Senator James Alesi) “was more far-reaching and would have established a drug collection system statewide to be conducted and paid for by the pharmaceutical companies. However, this new law is a good first step toward a comprehensive drug collection program, and I am hopeful we can build on our progress during the next few years.”

The “Don’t Flush Your Drugs” campaign (www.dontflushyourdrugs.net) consists of guidance for pharmacies and a poster for display (see graphic on next page). The poster is required to be “conspicuously displayed” as of March 24, 2009. The website has additional information including background on why we are now being instructed not to flush pharmaceuticals (when previous guidance often suggested otherwise, since flushing was considered the best way to keep drugs out of the hands of children). It also addresses why most community household hazardous waste (HHW) collection days do not accept medications. This latter issue is the reason that policy emphasis is now also being placed on community “take-back” programs. Explains the DEC, “to ensure that controlled substances (narcotics) are properly disposed of, the collection must ... occur separately from the other HHW and a law enforcement official must be present to take possession of those drugs.”

Local and regional pharmaceutical take-back programs growing in numbers

Westchester County is providing an excellent example of utility, convenience, and success for a community take-

back program for pharmaceuticals. In the past year and a half, Westchester County, partnering with the Westchester/Rockland Society of Pharmacists, has collected 4,250 pounds of unused medications from 1,600 households at drive-through events at multiple locations around the county. These events are linked with the county’s roving Household Recycling Days. Deputy Commissioner Louis Vetrone states that the program is “really taking off” and even further expanding this year. Vetrone and Environmental Project Coordinator Peter Costa describe a very comprehensive outreach program involving automated recorded calls, print ads and brochures, and email news blasts. These events have had increasing participation, but they also plan to add events at senior centers, in order to reach that crucial group for whom the drive-through events may not be as appropriate. See http://www.westchestergov.com/environment_householdrecyclingschedule.htm for the schedule of their events countywide.

On Long Island, Suffolk County Legislator Lynne C. Nowick is spearheading action on pharmaceutical take-backs. Her actions, together with Stony Brook University, Stony Brook University Medical Center, and other partners, supported the New York Sea Grant (NYSG) program in the planning of a community event this past April in Setauket, where almost 500 pounds of unwanted medicines were collected from 140 participants. Legislator Nowick has also worked with hospitals to sponsor take-back programs, including a yearly event to take place at St. Catherine of Siena Medical Center in Smithtown. Larissa Graham, the Long Island Sound Study Coordinator for the NYSG, collected evaluation data from their April event and found that 34 towns were represented, with some participants traveling over 45 miles to attend the event. All participants that filled out the evaluation survey said that they would attend another event, and the majority wanted to see this type of event held once a year. Participants also expressed that they would like to see legislation at the town or village level to collect unwanted medicines. Ms. Graham is currently developing a report designed to help other entities establish such collection programs in response to calls she has received requesting such guidance. “We are more than happy to lend advice to other agencies that are interested in organizing a similar event,” she says. To obtain their report about how to hold a successful pharmaceutical take-back program, please visit



NYS Department of Environmental Conservation
NYS Education Department



IMPORTANT MESSAGE

Help Protect New York's Waters

Don't Flush Unwanted Household Medications or Pour Them Down the Drain

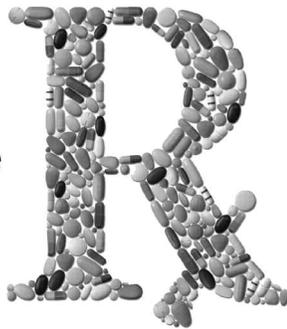
Return to collection events where available

or

Mix with something undesirable such as coffee grounds, cat litter or dirt

Tape up containers

Toss in your garbage



For full instructions or designated collection events visit:

www.dontflushyourdrugs.net

www.nyseagrant.org. In Nassau County, a town-run collection by the North Hempstead Solid Waste Management Authority in Port Washington was held in early June. (Contact Frances Reid at 516-526-2572 or reidf@northhempstead.com for information on future events.)

Ray Krupski, Director of Pharmacy at Eastern Long Island Hospital, describes a unique program in which anyone can drop off unused pharmaceuticals at their pharmacy, seven days a week, from 10:00am to 3:00pm. Situated on the far eastern end of Long Island (with community members often arriving by boat to the facility), the leadership at the hospital felt it important to make this contribution to protecting their ecosystem and conceptualized this program over a year ago. Because this is an ongoing collection and having law enforcement at the collection is not feasible, the program does not accept controlled substances. (It also does not accept chemotherapy drugs.) There are plans, however, for a community collection in October that would include law enforcement and therefore be able to include controlled substances. Mr. Krupski also does outreach to seniors in the community to build awareness of the program and to teach about the importance of proper disposal of expired medications. He regularly receives calls from other pharmacies interested in setting up such a program.

Pharmaceuticals collected at all of the above events are

destroyed by incineration. In many cases they are dealt with in the same manner as drugs confiscated by law enforcement. In the case of Eastern Long Island Hospital, the take-back program links with the hospital's existing setup for the facility's expired medications with Guaranteed Returns (a pharmaceutical reverse distribution vendor).

DEC engaging in cooperative activities

In May of 2008, DEC and DOH hosted a roundtable with stakeholders to discuss management options for unwanted drugs. The proceedings for this meeting can be downloaded at <http://www.dec.ny.gov/chemical/45118.html> (on the right sidebar of the web page, "Related Links"). This meeting not only addressed management of household/individual disposal of medications (such as the programs described above address), but also the vast issues associated with institutional pharmaceuticals management. One presentation focused on the state of practice in long-term care facilities where "common practice ... is to flush," (as is still approved by the DOH for these facilities). "While alternative management systems exist ... they are costly and lacking a mandate or a strong education program, and unlikely to gain administrative support," explained the presenter, Holly Vaughn of the Fort Hudson Nursing Home. The following presenter, Nancy Leveille of the NYS Health Facilities Association, said that, "there is potentially less waste of pharmaceuticals in a hospital setting than a nursing home/long-term care facility since hospitals have in-house pharmacies and tend to dispense medication by the individual dose." Apart from approved destruction methods for controlled substances however, flushing is still common for other medications. Important steps outlined at the meeting for hospitals and institutional pharmaceutical waste management included more regulatory clarity and education and the need to revise Medicare Part B to allow for crediting and reuse of unused medication. The DEC also pointed out that even the most advanced wastewater treatment used in NYS does not effectively remove pharmaceutical contaminants and that the state should "continue to monitor and support research to develop technologies to address this and other emerging contaminants."

In a letter to the US Environmental Protection Agency dated May 27, 2008, the DEC Commissioner Alexander Grannis stated, "The problem of pharmaceuticals and personal care products in water systems is multifaceted with no single solution," and that the Pharmaceuticals Working Group established by the DEC "has initially focused on reducing the disposal of unused pharmaceuticals into the waters of New York State." Looking beyond state lines for partnerships, the DEC is also participating in the New England Interstate Water Pollution Control Commission's work group on pharmaceuticals, and continuing its work with the US Geological Survey, which has reported for over

continued on back page

BCERF Brief for Teachers Distributed to All New York State United Teachers (NYSUT) Regional Offices

Breastfeeding and Other Reproductive Factors for Breast Cancer, and its Spanish counterpart, *La Lactancia Materna y Otros Factores Reproductivos de Riesgo para el Cáncer del Seno* are now available. The English version has been distributed in print to all regional NYSUT offices. Both versions are available on the BCERF website at <http://envirocancer.cornell.edu/BCERResearch/Teachers.cfm>

New York State teachers and other education professionals: please contact your NYSUT regional office if you would like one or more copies and have not yet received this *BCERF Brief*. The offices will have some of these copies enclosed in transparent envelopes. These envelopes contain the *Brief* and an evaluation postcard. We would appreciate your feedback!

The *Brief*, written by BCERF staff members Dr. Barbour Warren and Carmi Orenstein, results from BCERF's ongoing collaboration with education professionals in New York State. Although BCERF focuses on environmental factors, the topic of this particular *Brief* is reproductive factors for breast cancer. In our research with education professionals we encountered the need for more background on the established (largely reproductive) risk factors for breast cancer. This background is also important in order to understand many of the emerging hypotheses about environment and breast cancer risk (i.e. exposure to endocrine-disrupting chemicals). We emphasize breastfeeding, a protective factor, because with increased knowledge and support the teaching population may have the ability to act on this modifiable risk factor.

For more information, please contact Carmi Orenstein at csol@cornell.edu or (607) 255-1185. 

Also available in Spanish

Breastfeeding is protective.
A woman's risk for breast cancer decreases for every 12 months of breastfeeding. The population could be substantially reduced if women in developed countries breastfeed for longer periods of time. Even greater effects would be seen with longer periods of breastfeeding.

There are many public health gains to be made – in addition to reducing the risk of breast cancer – by all new mothers increasing the length of time they breastfeed. Babies and mothers both benefit from breastfeeding. Breast milk is considered the optimal food for newborn babies and infants. Along with providing all the nutrients needed for development, it contains antibodies that protect against childhood illnesses. Surprising effects into adulthood have also been documented for breastfed individuals. These include lower blood pressure and cholesterol, less overweight and obesity, and lower rates of type 2 diabetes. Some studies have even found a link to higher intelligence for adults who were breastfed as babies. Mothers benefit too, as breastfeeding speeds up the return to pre-pregnancy weight, and decreases the risk of ovarian cancer in addition to the decreased risk of breast cancer. The presence of environmental contaminants in breast milk has not been found to carry risks that outweigh these benefits of breastfeeding.

N.Y. Labor Law §206-c. Right of nursing mothers to express breast milk
New York is among a number of states that has legislation giving working mothers the right to use break time to express breast milk.
An employer shall provide reasonable unpaid break time or permit an employee to use paid break time or meal time each day to allow an employee to express breast milk for her nursing child for up to three years following child birth. The employer shall make reasonable efforts to provide a room or other location, in close proximity to the work area, where an employee can express milk in privacy. No employer shall discriminate in any way against an employee who chooses to express breast milk in the work place.

Funding provided by the NYS Department of Health and the NYS Department of Environmental Conservation
Sincere thanks to the over 1200 New York State teachers and school staff who participated in various stages of our 2003-2006 research on *Teachers and Breast Cancer: Understanding the Knowledge and Perceptions of a Population at Risk*.
Program on Breast Cancer and Environmental Risk Factors (BCERF) • <http://envirocancer.cornell.edu> • 607-254-2893

Reinstatement of State-funded BCERF Environmental Chemical Research and Educational Programming: Acknowledgements and Staff Update

We are pleased to tell *Ribbon* readers that our work on the cancer risk of environmental chemicals is fully funded for the fiscal year 2009-2010 (through March 31, 2010). We extend our sincere appreciation to Assemblyman Marc Alessi for spearheading the effort to include BCERF in the New York State budget, as well as to Assemblyman Robert Sweeney, Assemblywoman Michelle Schimel, Assemblywoman Pat Eddington, and Senator Craig M. Johnson. We are also appreciative of the many years of support Senator Carl Marcellino has given to the BCERF program, as well as the steadfast support given by many members of the breast cancer and environment community.

This state funding from the NYS Department of Environmental Conservation and Department of Health supports BCERF's translational research and associated educational programs on the cancer risk of environmental chemicals encountered in the home and workplace. We are delighted that we can continue to bring New Yorkers the latest research findings and develop new educational programs as well as continue our newsletter, website, and Cancer Forums to promote cancer prevention strategies and activities.

We have experienced several staff changes during this recent period of uncertainty. Current staffing within the state-funded part of the BCERF program:

- **Rodney L. Page, M.S., D.V.M.**, *Alexander de Lahunta Chair* of the Department of Clinical Sciences, Professor of Medicine, and Director of the Sprecher Institute for Comparative Cancer Research, provides administrative direction and oversight.
- **Suzanne Snedeker, Ph.D.**, is the Associate Director of Translational Research.
- **Carmi Orenstein, M.P.H.**, is Assistant Director, Health Educator, and Editor of *The Ribbon*.
- **Lyn (formerly Netter) Park** is Administrative Assistant.
- **Barbour Warren, Ph.D.**, BCERF Research Associate (funded primarily by a grant from the USDA), will be devoting some of his time to projects within this year's NYS grant.
- **Nellie J. Brown, M.S., C.I.H.**, Director of Workplace Health and Safety Programs for the New York State School of Industrial and Labor Relations, will continue to collaborate on BCERF's carcinogens in the workplace projects.

We express our deep gratitude and very best wishes to former BCERF staff members who are no longer working with us:

- **Heather Dantzker, Ph.D.**, Research Associate was responsible for risk perception research, web database on the cancer risk of turf pesticides, and outreach to pesticide applicators and trainers on reducing cancer risk.
- **Chris Batman-Mize, M.S.W.**, was the Outreach Coordinator for the BCERF *Alert* brochure and *Protection is Prevention* poster on workplace chemicals that may affect breast cancer risk of female firefighters and emergency responders.
- **Heather Mira Stone, M.P.H.**, was Program Manager for the *Estrogen Connections* project on environmental estrogens found in everyday products. 



This article can be found on our website at <http://envircancer.cornell.edu/Newsletter/articles/v14Reinstatement.cfm>

Over the summer we will be working on a re-design of *The Ribbon* newsletter. We welcome your input and ideas on ways to improve layout and readability. Contact Carmi Orenstein at csol@cornell.edu or (607) 255-1185.

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Editor

Carmi Orenstein,
M.P.H., *Assistant
Director*

Design

West Hill Graphics,
Ithaca, NY



A full PDF of this newsletter is available at <http://envirocancer.cornell.edu/Newsletter/pdf/v14i2.pdf>

Keeping Pharmaceuticals Out of the Water: Activities Around New York State *continued from page 5*

a decade on the presence of human and veterinary drugs in waterways. Also on a national level, DEC is participating in the Product Stewardship Institute's pharmaceuticals initiative. Commissioner Grannis' letter to the EPA makes an appeal for "a more proactive and precautionary approach toward limiting the levels of contaminants that enter in sources of drinking water..." and outlines the deficiencies of federal regulations currently in place.

With over 225 million prescriptions filled annually in NYS, no access to take-back pro-

grams for most of the State's residents, barriers to carrying out best practices in institutions, and regulatory deficiencies, clearly this is just the beginning of the action needed for the management of pharmaceutical waste. 



This article can be found on our website at

<http://envirocancer.cornell.edu/Newsletter/articles/v14CleanWater.cfm>

Concerns with the use of triclosan addressed in new fact sheet

In 2007 we interviewed Dr. Anthony Hay on his work addressing contaminants in sewage sludges. He discussed triclosan, a compound that shows up increasingly in sludges, ecologic samples, and human blood, urine, and breastmilk. Triclosan is a widely-used biocide that is present in almost all antibacterial soaps, as well as many other products. According to Dr. Hay, as well as a 2005 FDA advisory panel and a 2000 report from the American Medical Association, there is no sound scientific support for its use, and it may pose hazards (such as antibiotic resistance and ecologic and health concerns). A new fact sheet outlining "The Trouble with Triclosan" is available at <http://www.foodandwaterwatch.org/water/chemical-contaminants/what-is-lurking-in-your-soap>. It was produced by two organizations: Food & Water Watch and Beyond Pesticides.



Cornell University
*Program on Breast Cancer and
Environmental Risk Factors*

Vet Box 31
College of Veterinary Medicine
Cornell University
Ithaca, NY 14853-6401

Phone: (607) 254-2893
Email: breastcancer@cornell.edu
Web: <http://envirocancer.cornell.edu>



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