

Soy Alert!

THE INDUSTRY ON THE ATTACK
By Kaayla T. Daniel, PhD, CCN

Recent events show the powerful soy industry regrouping and on the attack. The current news is discouraging, but it may be a sign that the soy industry is feeling the brunt of our concerted efforts to warn the public about the dangers of soy foods, especially for infants.

A LAB SHUT DOWN

For more than 25 years Retha Newbold, PhD, has investigated endocrine disruption caused by soy genistein, DES and environmental estrogens, and has courageously reported on those findings at symposia and in peer-reviewed journal articles. On May 1, her work came to a stop when the US government summarily closed her laboratory at the National Institute of Environmental Health Science's Laboratory of Molecular Toxicology and dispersed her staff. Newbold was given no reason for the closing and could only state that "the scientific director has decided not to support my research."

The lab closing followed the January publication of a paper in *Biology of Reproduction*, which showed that soy given to newborn mice disrupted oocyte development, thus pointing to soy infant formula as a likely contributor to America's epidemic of infertility.

In earlier work, Newbold showed that soy genistein could be more carcinogenic than DES if exposure occurs during critical periods of differentiation—as is the case with fetuses and babies.

Most recently Newbold has been investigating the developmental origins of adult obesity. Using DES as a model xenoestrogen, she discovered that adult weight homeostasis is extremely vulnerable to low-level fetal exposures. Indeed, exposure to DES even at very low parts-per-billion during pregnancy can cause obesity in adulthood even when energy expenditures and food intakes match normal-weight controls.

In a letter of protest to David Schwartz, Director of the NIEHS, John Peterson Myers, PhD

CEO/Chief Scientist of Environmental Health Sciences in Charlottesville, Virginia, and Chairman of the Board of the National Environmental Trust, and a coauthor of the seminal book *Our Stolen Future*, wrote, "Given how important obesity and metabolic syndrome are for public health, it makes no sense to close a laboratory that is actively exploring one of the least studied and most promising avenues for public health intervention. . . Dr. Newbold's work represented the best of NIEHS science "

HEARINGS ON SOY FORMULA

Meanwhile, the NIEHS's Center for the Evaluation of Risks to Human Reproduction (CERHR) convened an independent panel to review the safety of soy genistein and soy infant formula. On March 17, the panel announced its decision that soy infant formula should be considered "safe" until proven otherwise and that there is "negligible concern" for reproductive and developmental effects. This sop to the industry flies in the face of warnings issued by the Israeli and French governments as well as recent studies published by Dr. Retha Newbold and others.

Representatives from Archer Daniels Midland, Solae, DuPont, Ross and other soy manufacturing companies were there in force, as well as soy industry-paid scientists, lobbyists and spokespersons Kenneth D. R. Setchell, Mark Messina and Nancy Chapman. Throughout the public proceedings, Dr. Setchell sat in the rear, rudely making the comment "rubbish" when panel members revealed their ignorance of phytoestrogens, doses, potencies and pathways. He periodically asked permission to go to the microphone where he arrogantly corrected the panel.

In the end, the panel ruled in the industry's favor, most likely because they felt overwhelmed by the sheer mass of studies and/or by industry pressure. Only one member disagreed. Dr. Ruth Etzel of the Alaska Native Medical Center in



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Anchorage, said there should be a higher level of concern for infant exposure to genistein as it could adversely affect brain and reproductive system development.

As for the other panel members, whatever happened to the precautionary principle of “better safe than sorry?”

THE RELENTLESS TRUTH

The good news is that reports on the truth about soy are not going away. On May 27, the *Los Angeles Times* published an article entitled “Is Soy a Fab Bean or Health Danger?” with a subhead, “The benefits of soy, once lauded, are now coming under attack,” by Hilary E. MacGregor. MacGregor describes a “soy backlash” and a “fall from grace” in the form of “a crop of books and articles” warning about the dangers, not benefits, of the bean. She even writes that soy has its own “tell-all” book, *The Whole Soy Story*.

MacGregor notes that even mainstream scientists are pulling back on once-heady health predictions for the bean, quoting Mark Messina as saying, “It’s just food! . . . We are talking about diet here. Not the fountain of youth.”

Messina, who has organized six symposia devoted to reporting on research on the use of soy in the prevention and treatment of disease, is now kept busy spinning negative findings into more neutral findings. For example, his recent article in the March, 2006 issue of *Thyroid* minimizes adverse effects on the thyroid by saying that “collectively, the findings

provide little evidence that in euthyroid, iodine-replete individuals, soy foods or isoflavones adversely affect thyroid function.” He conceded that “some evidence suggests that soy foods, by inhibiting absorption, may increase the dose of thyroid hormone required by hypothyroid patients,” but concludes that “hypothyroid adults need not avoid soy foods” so long as they “make sure their intake of iodine is adequate.”

MacGregor describes recent studies that have detracted from the “bean’s starry promise,” including a January 2006 review of 22 studies which showed that soy protein with isoflavones did not, in fact, “improve” cholesterol levels. This led the American Heart Association to publish an advisory which stated that the AHA “could not recommend the use of isoflavone supplements in pills or food for the prevention of heart disease.”

Another review, this one a meta-analysis of 18 “carefully selected” studies, published in the April issue of the *Journal of the National Cancer Institute*, found that eating soy might slightly reduce the risk of breast cancer, “but not enough

THE LEGACY OF RETHA NEWBOLD

A Medline search comes up with 59 studies over the past 10 years for which Retha Newbold was principle author or co-author. Newbold primarily looked at the effects of the synthetic estrogen DES on the development and growth of rats; but she also examined other sources of endocrine disruption, including the phytoestrogens genistein and diadzen in soy. Some important published studies by Newbold include:

2000: Exposure to genistein in young rats causes “subtle alterations” in some sexually dimorphic behaviors, including play behavior (*Toxicol Sci* 2000 Jun;55(2):311-9).

2001: Genistein fed to pregnant rats crosses the placenta and reaches fetal brain tissue (*Reprod Toxicol* 2001 Mar-Apr;15(2):105-10).

2001: Exposure to genistein during development resulted in decreased prostate weight and several abnormalities in the sexual organs of both males and females. Most interestingly, exposure to genistein resulted in increased renal tubal mineralization (*Reprod Toxicol* 2001 Nov-Dec;15(6):647-63).

2002: Exposure to genistein resulted in decreased numbers of spleen cells in rats, indicating an adverse effect on the immune system (*Toxicol Appl Pharmacol* 2002 Jun 15;181(3):219-27).

2002: Neonatal exposure to genistein caused disruption of ovulation cycles in rats (*Biol Reprod* 2002 Oct;67(4):1285-96).

2002: Neonatal exposure to genistein resulted in abnormal estrous cycles, altered ovarian function, early reproductive senescence and subfertility/infertility in female rats (*Biol Reprod* 2005 Oct;73(4):798-806).

2006: A limited transfer of genistein to mother’s milk occurred when lactating rats were fed dietary genistein (*Reprod Toxicol* 2006 Apr;21(3):307-12).

to recommend soy foods or supplements.” For breast cancer survivors, taking soy supplements could actually be ill-advised, according to coauthor Robert Clarke, a professor at Georgetown University’s Lombardi Comprehensive Cancer Center.

The article also mentions possible thyroid and reproductive problems, noting the objections of Dr. Ruth Etzel to the CERHR panel’s whitewash.

NEW STRATEGIES

As the old arguments for eating soy—for example, to ward off cancer and heart disease—crumble, the industry has come up with new ones aimed not at hippies and baby boomers, but at children and the unborn. Anna Wu, a professor of preventive medicine at the University of Southern California, found that Asian girls who eat more soyfoods during adolescence when their breasts are developing seem to get less breast cancer later on. Though her study did not adequately explore other dietary and lifestyle factors, this idea got an airing in no less than the *Wall Street Journal*, in

a May 30 article, “Can Preteens Take Steps to Reduce the Risk of Breast Cancer.”

MacGregor also mentions a “recent study” which suggests “that if women consume soy during the third trimester of pregnancy, it could help program fetuses with a craving for health foods and a good metabolism.” No such study comes up in a Medline or Google search and MacGregor did not reply to an email asking her for further information.

The industry is also making hay with a study published in the April, 2006 issue of the *Journal of the American Dietetic Association* in which almost a quarter of elementary school children chose soymilk over cow’s milk at the end of a 14-week trial. “Soymilk has major health advantages over cow’s milk,” states Jennifer Reilly, RD, the study’s lead author. “It avoids the problem of lactose intolerance and skips the bad fats kids seem to like.” Currently most US schools do not offer soymilk but the industry is hoping to change that by pushing to make soymilk reimbursable in the federal school lunch program.

Finally, in what has to be the year’s most cynical marketing ploy, SoyLutions, a Canadian company specializing in the manufacturing and marketing of “health” beverages, has announced a partnership with the Children’s Wish Foundation. Until March 2007, SoyLutions will donate a portion of the sales from every case of its Earth Shake soy and oats beverages to the foundation. Unfortunately, soy consumed by pregnant women, or by developing children, may prevent their most basic wishes from coming true—normal growth and development and a normal sex life as adults. ☹☹

POSSIBLE LEGAL ACTION ON MEDICAL PROBLEMS CAUSED BY SOY

The Weston A. Price Foundation is undertaking an initiative to investigate instances and arrange possible legal assistance for individuals who believe that they or their child may have suffered serious physical or medical consequences as a result of ingesting one or more products containing soy.

A growing body of credible medical and dietary research suggests that soy products may cause adverse medical and developmental conditions in susceptible persons, especially children—who in some instances may be affected by soy products consumed either by themselves (for instance, in baby formula) or by their mothers prior to giving birth.

The Weston A. Price Foundation is exploring the causal connection between soy and various serious conditions—see list below. We have also sought out competent attorneys in the United States and elsewhere, who may develop medical evidence in a number of these cases to pursue damages or other appropriate remedies against the manufacturers and sellers of soy products.

A partial list of medical conditions possibly attributable to soy consumption includes asthma, chronic fatigue, depression, diabetes, heart arrhythmia, heart or liver disease, infertility and reproductive problems, irritable bowel syndrome, learning disabilities, pancreatic disorders, premature or delayed puberty, rheumatoid arthritis, thyroid conditions, uterine conditions and weight gain.

If you would like to participate in these efforts, we urge you to contact the Weston A. Price Foundation at westonaprice_soy@verizon.net or (202) 363-4394. Upon receipt of your e-mail, we will forward you, via e-mail with attachments, a questionnaire and release form. We urge you to complete the questionnaire, fully and honestly, to the best of your ability. Also, please sign and return the medical authorization(s) along with the questionnaire, in order that we might gather relevant medical records in those cases that warrant further investigation. Mailing address and fax number will be provided to you with the questionnaire.

PLEASE BE ADVISED that not all of these potential claims can or will be pursued, even if we conclude that you or your child may have suffered some adverse effects from the consumption of soy products. It may be too late under applicable state laws to pursue some claims; and in other cases, the parties responsible for your condition may not be adequately identified, or the recoverable damages may not warrant pursuit of the responsible parties. However, if you would like us to conduct a preliminary investigation of the circumstances of your potential claim, without cost or obligation to you, then promptly contact us at westonaprice_soy@verizon.net. We hope to be able to assist you in this matter, if our inquiry develops evidence of corporate responsibility for your medical problems or those of your child.

Federal Update

By Bill Sanda, Executive Director

I have much news to report in this issue's Federal Update, starting with developments in the proposed National Animal Identification System. This section was prepared with the help of Judith McGeary, our Austin, Texas chapter leader, and Executive Director of the Farm and Ranch Freedom Alliance, www.farmandranchfreedom.org. Please see the new USDA Guidance on NAIS and Small Farms and Non-Commercial Producers on page 68.

NAIS UPDATE

US Department of Agriculture (USDA) Secretary Mike Johanns held a tele-press conference on Thursday, April 6 in which he updated us on the development of the National Animal Identification System (NAIS). The good news is that USDA will not propose regulations in July 2006 for NAIS as originally scheduled and the original timelines were extended for the program. The bad news is that the USDA has simply decentralized the system without significantly changing the requirements. (Please see *Wise Traditions* Winter 2005/Spring 2006 edition for a complete description of NAIS along with original timelines at www.westonaprice.org/federalupdate/aa2006/infoalert_032006.html.)

At least we now have time: time to educate people about this program; time to work with our state agencies; and time to place pressure on our elected officials. For current information on the status of NAIS in your state, please see www.libertyark.net.

Regarding the bad news, perhaps USDA recognized the fact that handling NAIS as a nationalized program in a single database was technologically impossible. Perhaps USDA hopes to avoid a direct challenge to NAIS by not adopting regulations that could be challenged in court. Or, perhaps USDA hopes that those who are against NAIS will not be able to effectively oppose a system that is scattered through 50 states

and multiple private entities.

The new plan calls for implementation of NAIS by the states and private entities, and for USDA to have access to the information through a metadata portal. This is no less burdensome or intrusive on animal owners than the original plan.

NAIS poses a serious threat to all farmers, ranchers, livestock owners and companion-animal owners, whether they are organic or conventional, small or large, involved with animals for business or for pleasure. Across the country, all persons with even one horse, cow, chicken, pig, goat, sheep, exotic animal or virtually any other livestock animal on their premises will be required to register their homes and property into a database and subject their property and animals to government surveillance.

Each animal would be individually identified, physically tagged (in many cases with radio frequency tags or microchips), and every "event" in the animal's life (including birth, movement to and from premises, and death) reported to the government or to a private industry database that the government has the power to access. The only exception from individual identification and tracking is for large industrial agricultural producers, which will be able to use just one group number for an entire confinement house of livestock. Small producers who do not manage their animals in isolated groups will not qualify for this convenience.

NAIS does not distinguish between large corporate factory farms and the smallest family producer, hobby farmer or the grandmother with a few laying hens. Many families could be branded as criminals because of their religious convictions and concerns over privacy and property rights. Many small and medium-size farmers and ranchers may be driven out of business, and the consolidation of our food supply into the hands of a few large, multinational corporations will

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