

# Say No to rBGH!

## Keep Artificial Hormones out of Dairy Products

### What is rBGH?

Recombinant Bovine Growth Hormone (rBGH or rBST) is a genetically engineered hormone injected into cows to increase milk production by 8-17 percent.<sup>1</sup> The Monsanto Corporation manufactures the product, which is sold under the trade name Posilac.<sup>2</sup>

### Background

In 1993, the FDA approved rBGH, even though many scientists and government leaders were critical of the hormone, the inadequate research on its risks, and the approval process. Twelve years after it was approved in the U.S., significant health concerns regarding rBGH remain. The European Union, as well as Japan, Canada, and Australia have banned rBGH. Codex Alimentarius, the U.N. body that sets food safety standards, has refused to approve the safety of rBGH three times.<sup>3</sup>

### Health Effects

Recombinant bovine growth hormone causes harm to cows and may pose harm to humans.

### Cancer Risk

Injections of rBGH increase another powerful hormone, called IGF-1, in the cow and the cow's milk. Numerous studies indicate that IGF-1 survives digestion. Too much IGF-1 in humans is linked with increased rates of colon,

breast, and prostate cancer.<sup>4</sup> "Definitive studies demonstrating the lack of absorption of rBST or IGF-1 upon oral administration were neither conducted nor requested" Health Canada concluded. "Simply not enough is known about how IGF-1 functions to properly evaluate the potential health impacts."<sup>5</sup>

While it's not clear that rBGH given to cows significantly increases IGF-1 in humans, why take the chance simply so dairies can produce more milk from fewer cows?

### Mastitis and Antibiotic Resistance

Use of rBGH on dairy cows increases the rate of mastitis, a bacterial udder infection, by 25%.<sup>6</sup> Mastitis leads to increased use of antibiotics, including important ones used to treat humans, like penicillin.<sup>7</sup> The overuse of antibiotics is already a serious problem in the livestock industry – giving rise to new strains of "superbugs" that are becoming more resistant to antibiotics and are strongly linked to hard-to-treat illnesses in people.<sup>8,9</sup>

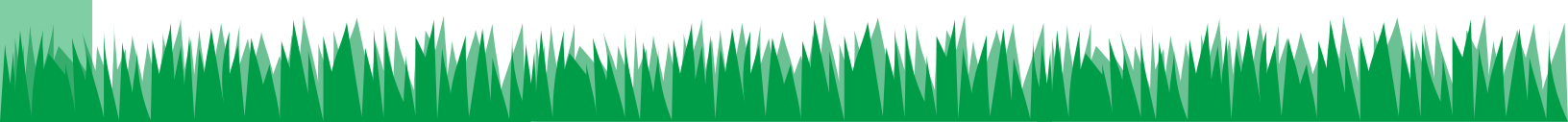
In 1992, the U.S. General Accounting Office recommended that the FDA not approve rBGH until the mastitis problem was further studied. "Concern exists now about whether antibiotic levels in milk are already too high," the GAO wrote. "[T]here has been no examination of whether rBGH use will increase antibiotic levels in milk or beef beyond that which currently exist and, if so, to what degree those levels are acceptable."<sup>10</sup> rBGH also increases birth defects, pus in milk, and clinical lameness in cows.<sup>11</sup>

### Immunological Effects

In one study, rats that were fed rBGH, including one given a relatively low dose, developed antibodies to rBGH. This effect, if validated, "would suggest the possibility of occasional hypersensitivity reactions in those consuming food products from rBST-treated cattle."<sup>12</sup> The FDA brushed aside these disturbing findings and did not fully investigate these results.

### A Tool for Factory Farms

In the United States, about 15% of the dairy herds use recombinant Bovine Growth Hormone; overall, approximately 22% of dairy cows in the U.S. are injected with the



hormone.<sup>13</sup> For the most part, this hormone is a tool for dairy factory farms to eke out even more milk per cow. The hormone is used in 54% of large herds (500 animals or more), 32% of medium herds, and only 8% of small herds.<sup>14</sup>

## Consumer Backlash

Consumers are seeking dairy products produced without rBGH, and companies are responding. Most recently, the Tillamook County Creamery Association, a 150-dairy farmer cooperative, voted to ban rBGH in their cheese production due to consumer requests.<sup>15</sup> Ben & Jerry's ice cream brand is also rBGH-free, explaining "We think its use is a step in the wrong direction toward a synthetic, chemically-intensive, factory-produced food supply."<sup>16</sup>

Several years ago, Oakhurst Dairy in Maine was sued for advertising their products as rBGH-free; they were eventually required to state that the FDA has not found any significant difference between products with and without the hormone on their products.<sup>17</sup> Nevertheless, almost all dairy products sold in Maine are rBGH-free, in response to consumer rejection of the product. And organic food, which cannot be produced with growth hormones, is a skyrocketing market, growing almost 20% annually over the last decade. Organic dairy products constituted \$1.3 billion in sales in 2003.<sup>18</sup>

## Endnotes:

<sup>1</sup> "Bovine Somatotropin (bST)" Biotechnology Information Series (Bio-3) North Central Regional Extension Publication Iowa State University - University Extension, December 1993. [http://www.nal.usda.gov/bic/Education\\_res/iastate.info/bio3.html](http://www.nal.usda.gov/bic/Education_res/iastate.info/bio3.html)

<sup>2</sup> Cruzan, Susan M. FDA Press Release on rBST approval. Food and Drug Administration. November 5, 1993. <http://www.fda.gov/bbs/topics/NEWS/NEW00443.html>

<sup>3</sup> North, Rick. "rBGH-free Oregon Campaign Fact Sheet" Oregon Physicians for Social Responsibility. [http://www.oregonpsr.org/csf/rbgh\\_fact\\_sheet.doc](http://www.oregonpsr.org/csf/rbgh_fact_sheet.doc) [Accessed March 20, 2006]

<sup>4</sup> Health Care Without Harm "Health Care Without Harm Position Paper on rBGH" <http://www.noharm.org/details.cfm?ID=1104&type=document> [Accessed March 22, 2006]

<sup>5</sup> rBST internal review team "rBST (Nutrilac) 'Gaps Analysis' Report." Health Protection Branch, Health Canada, April 21, 1998. p. 25

<sup>6</sup> Doohoo I. et al, "Report of the Canadian Veterinary Medical Association Expert Panel on rBST," (Executive Summary) Health Canada, November, 1998. [http://www.hc-sc.gc.ca/dhp-mps/vet/issues-enjeux/rbst-stbr/rep\\_cvma-rap\\_acdv\\_tc-tm\\_e.html](http://www.hc-sc.gc.ca/dhp-mps/vet/issues-enjeux/rbst-stbr/rep_cvma-rap_acdv_tc-tm_e.html)

<sup>7</sup> North, Rick. Ibid.

<sup>8</sup> Health Care Without Harm, *ibid*.

<sup>9</sup> Fey Paul, Thomas J. Safranek, Mark E. Rupp, Eileen F. Dunne, Efrain Ribot, Peter C. Iwen, Patricia A. Bradford, Frederick J. Angulo, and Steven H. Hinrichs. Ceftriaxone-resistant Salmonella infection acquired by a child from cattle. *New Engl. J. Medicine*. April 27, 2000.

<sup>10</sup> GAO "Recombinant Bovine Growth Hormone: FDA Approval Should be Withheld Until the Mastitis Issue is Resolved." U.S. General Accounting Office, GAO/PEMD-92-96, August 1992.



## What You Can Do:

Purchase dairy products that are labeled "rBGH-free," "rBST-free," or "organic." We have handy state guides to rBGH-free brands on our website. Also, tell your supermarket, favorite dairy brand, and school district that you want rBGH-free dairy products. Find out more at: [www.foodandwaterwatch.org/food/dairy](http://www.foodandwaterwatch.org/food/dairy)

<sup>11</sup> North, Rick, *ibid*.

<sup>12</sup> Health Canada "Report of the Royal College of Physicians and Surgeons of Canada Expert Panel on Human Safety of rBST" Executive Summary. January, 1999. [http://www.hc-sc.gc.ca/dhp-mps/vet/issues-enjeux/rbst-stbr/rep\\_rcpsc-rap\\_crmcc\\_e.html](http://www.hc-sc.gc.ca/dhp-mps/vet/issues-enjeux/rbst-stbr/rep_rcpsc-rap_crmcc_e.html)

<sup>13</sup> APHIS, "Bovine Somatotropin: Info Sheet" USDA, May 2003. <http://www.aphis.usda.gov/vs/ceah/ncahs/nahms/dairy/dairy02/Dairy02BST.pdf>

<sup>14</sup> APHIS, *ibid*.

<sup>15</sup> McMullen, Jim. "Guest Editorial, Tillamook County Creamery Association." *The Cheese Reporter*. May 20, 2005.

<sup>16</sup> Ben & Jerry's, "Thoughts on Recombinant Bovine Growth Hormone (rBGH)", [http://www.benjerry.com/our\\_agmrcy/our\\_values/position\\_papers](http://www.benjerry.com/our_agmrcy/our_values/position_papers) [Accessed March 13, 2006]

<sup>17</sup> Canfield, Clark. "Oakhurst, Monsanto resolve lawsuit over milk labeling." *Associated Press*. December 24, 2003. [http://www.organicconsumers.org/rbgh/monsanto\\_rbgh\\_maine.cfm](http://www.organicconsumers.org/rbgh/monsanto_rbgh_maine.cfm)

<sup>18</sup> Miller, Malinda. "Organic Dairy Profile." *Agricultural Marketing Resource Center*. May 2005. <http://www.agmrc.org/agmrc/commodity/livestock/dairy/organicdairyprofile.htm>

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