Comments on House Bill 1499
Labeling of Food Containing a Product of Cloned Animals
Health and Government Operations Committee
Annapolis, Maryland
March 18, 2008

By
Michael Hansen, Ph.D.
Senior Scientist

Consumers Union (CU), publisher of *Consumer Reports*[1], welcomes the opportunity to testify before this committee on House Bill 1499 which would require labeling of any product of a cloned animal or its offspring.

For the reasons offered below, particularly because of consumer right-to-know and due to inadequate safety testing by the US Food and Drug Administration (FDA), Consumers Union strongly support HB 1499. We also urge the committee to require labeling for at least two generations of clone progeny, i.e. both the "children" and "grandchildren" of clones should be labeled.

Cloning technology, aka somatic cell nuclear transplant (SCNT), is very new and is a very controversial technology. We believe that no new technology should be allowed for use in livestock unless it is proven safe for both animals and humans. In addition, when animals are created in such a radically new manner, they should be labeled.

Consumers clearly concerned about cloning and want labeling of meat and milk products from cloned animals and their progeny.

There are numerous reasons why meat and milk products from clones and their progeny should be labeled as such. First, numerous polls show consumers are clearly concerned about this technology and demand labeling. Let me cite the two most recent polls. In June, 2007, the Consumer Reports National Research Center polled over 1,000 people nationwide on various food labeling issues; some 69% of those polled were

[1] Consumers Union (CU) is an expert, independent, nonprofit organization whose mission is to work for a fair, just, and safe marketplace for all consumers. CU publishes *Consumer Reports*, which has over 4 million subscribers to the print edition and over 3 million subscribers to the online edition ConsumerReports.org. To maintain our independence and impartiality, Consumers Union accepts no outside, no free test samples, and has no agenda other than the interests of consumers. Consumers Union supports itself through the sale of our information products and service, individual contributions, and a few noncommercial grants.

concerned with "eating meat or milk products from cloned animal" and 89% agreed that "meat and dairy products from cloned animals should be labeled as such."[2] In September, 2007, the International Food Information Council released a poll that found that more than twice as many Americans view cloning negatively as those that view it positively: 50% of American polled viewed cloning as "not very favorable" or "not at all favorable" compared to 22% that found it "very favorable" or "somewhat favorable." Furthermore, even more surprising, 53% of Americans were unlikely to buy meat, milk, and eggs from cloned animals *even if the FDA said they were safe*; the figure for products of cloned offspring is 51%.[3] Thus, slightly more than half the American population would buy meat or milk neither from clones nor their offspring. These two surveys clearly show that people are very concerned about this issue and want food products of clones and their offspring clearly labeled. We believe that in an area where consumer views are so strong, consumers have a right-to-know and a right-to-choose whether or not to eat food that has been created through cloning.

FDA risk Assessment on cloning is insufficient

Second, the FDA inadequately assessed the safety of meat and milk from cloned animals, so labeling is needed to be able to track any possible adverse health effects of eating products of cloned animals.

Cloning is clearly unsafe for animals. According to the FDA's Risk Assessment, the vast majority (e.g. > 90%) of cloning attempts end in the death of the clone. Many clones have birth defects including anemia, deformed limbs and heads, polycystic kidneys, and lack of an anus[4]. Those that survive often suffer from deficient immune systems and require large doses of antibiotics. At the very least, raising clones will necessitate greater use of antibiotics on food animals, worsening the existing problem of antibiotic-resistant bacteria that can infect and sicken humans. In addition, the surrogates that carry theses clones are often treated with various reproductive hormones, which could get into the food supply. The National Academy of Sciences has expressed concern that clones might also spread bacteria like e coli 0157:H7, but the FDA gathered no data on this topic.

FDA's Risk Assessment concludes that clones that survive to adulthood are safe to eat. However it bases this conclusion on the scantiest of data. The conclusions of safety appear to be based on data on milk from 43 cow clones, and data on beef from 16 cow clones, and 5 pigs. FDA asserts that goat's milk and cheese from clones are safe even though it has no data whatsoever on the composition of milk and meat from cloned

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[2] See pp. 12-14 in: http://greenerchoices.org/pdf/Food%20Labeling%20Poll-final_rev.pdf
[3] See questions 24, 25, 27, 28 in: http://www.ific.org/research/biotechres.cfm, http://www.ific.org/research/upload/FINAL_2007-TOPLINE-DATA-ONLY-ES.pdf
[4] see CU's comments to FDA on cloning, at: http://www.consumersunion.org/pdf/FDA_clone_comments.pdf

goats. Furthermore, some of the studies on milk from clones or meat and milk from clones and their offspring have found differences, but the FDA ignored them.[5]

FDA assumes that deformed or sick animals will be removed from the food supply during ante mortem inspection, and so does not consider such animals in their risk assessment; they only consider clones that "appear to be healthy" or that are exhibiting subtle health effects. Since a large percentage of clones (a majority is some studies) have such serious birth defects that they do not survive to adulthood, this could be a significant number of animals. The recent recall of 143 million pounds of meat from Westland/Hallmark shows that this assumption is not valid.

Genetic defects in clones may be passed on to offspring

Third, data show that various abnormalities may be passed on to offspring of clones. However, FDA has argued that "anomalies present in clones do not appear to be transmitted to the next generation."

But some data do not support FDA's assertion. One potential anomaly that may be passed on is shortened telomeres, the endings of chromosomes that are believed to control aging and susceptibility to cancer. Dr. Dean Betts, University of Guelph, Ontario, found that sheep and goat clones and their offspring have significantly shorter telomeres than non-clones.[6] As Dr. Betts told a journalist, "It [the telomere] provides chromosomal stability. Without it, you have a greater chance of genomic instability, which leads to cancer . . . Do they [the offspring of clones] have a possibility of shorter life spans and age-related diseases? We don't know what it means or if it has health impacts. I would say not enough study has been done."[7] Dr. Betts' response to FDA conclusion that "anomalies present in clones do not appear to be transmitted to the next generation"? "Based on my study, I wouldn't support that statement. My study would say the opposite."[8]

The US National Academy of Sciences has also raised questions about whether progeny of clones can contain defects: "Little evidence is available in the scientific literature to assess whether the progeny of cloned animals are at an increased risk for inherited or developmental defects."[9]

Given the unanswered questions and the lack of data on the health of offspring of clone, it would be prudent to require more data involving a larger number of animals.

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[5] see CU's comments to FDA on cloning, ibid

[6] Betts, D. et al. Telomere length analysis in goat clones and their offspring. *Molecular Reproduction and Development* 72: 461-470.

[7] Roslin, A. 2008. Clone, clone on the range. At: http://straight.com/article-132924/clone-clone-on-the-range

[8] Roslin, A. 2008. *Ibid.*

[9] See pg. 222 in NRC. 2004. Safety of Genetically Engineered Foods: Approaches to assessing unintended health effects. Subreport: Methods and mechanisms of genetic manipulation and cloning of animals." National Academy Press, Washington, D.C.

Consequently, **we recommend that the progeny of clones should be tracked for at least two generations of offspring** to see if they suffer health problems.

In sum, CU strongly supports HB 1499, and **urges Maryland to require labeling of the products of cloned animals through at least two generations of progeny.**

For those that argue that such a labeling decision should be done at the national level, we note that the **passage of HB 1499 would encourage the US Congress to pass labeling legislation introduced by Maryland's Senior Senator, Barbara Mikulski**.