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17 IN THE SUPERIOR COURT OF SAN BENITO COUNTY

18 STATE OF CALIFORNIA

19 ORGANIC PASTURES DAIRY)
20 COMPANY, LLC, and) Case No.: CU-07-00204
21 CLARAVALE FARM, INC.,)
22)
23 Plaintiffs,) AFFIDAVIT OF
24) THEODORE F. BEALS, M.D.
25 v.)
26)
27 STATE OF CALIFORNIA and)
28 A.G. KAWAMURA, Secretary of California)
Department of Food and Agriculture,)
Defendants.)

STATE OF MICHIGAN)

: ss.

COUNTY OF JACKSON)

I, Theodore F. Beals, being of sound mind and body and duly sworn, do hereby
make the following statements based on my personal knowledge and to the best of my
information and belief:

1. I am a resident of Grass Lake, Michigan.

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2. I received my Bachelors (Arts and Sciences), Masters (Botany) and M.D. (medical school) degrees from the University of Michigan in 1956, 1957 and 1966, respectively.
3. I have been licensed to practice medicine in the State of Michigan since 1967.
4. I completed my residency in Pathology from the University of Michigan in 1971.
5. I am certified in Anatomic Pathology by the American Board of Pathology.
6. I have written one book on Pathology and have contributed several chapters to books on Pathology.
7. I have published over 80 peer-reviewed articles on medicine, microscopy, assays, cancer and cytotoxicity.
8. During my career, I have been a member or officer of more than 20 professional organizations.
9. I have testified several times in a court of law as an expert forensic pathologist.
10. A true and accurate copy of my professional curriculum vitae is attached hereto as Attachment A.
11. As board certified in Anatomic Pathology, I am qualified to investigate disease and make a diagnosis.
12. In the context of raw milk for human consumption, my experience with pathology also deals with microbiology of disease.
13. Coliforms are organisms that grow in a specified culture. A coliform, however, is not anything specific.
14. The vast majority of coliforms are not pathogenic, i.e., causing illness in humans.

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15. Pathogens that are known to cause illness in humans include *E. coli* O157:H7, *Campylobacter jejuni*, *Listeria monocytogenes*, and salmonella.

16. According to the Centers for Disease Control and Prevention, from 1998 to 2002, pathogens like *E. coli* O157:H7, *Campylobacter jejuni*, *Listeria monocytogenes*, and salmonella were found in many common raw foods, for example beef, poultry, eggs, pork, finfish, shellfish and vegetables.

17. Although traditionally, coliforms may be an indicator of environmental contamination, the presence of coliforms is not an indicator of the presence of pathogens.

18. I have reviewed the provisions of AB1735 which was effective on January 1, 2008.

19. Specifically, I have reviewed the following provision of AB1735:

SEC. 2. Section 35781 of the Food and Agricultural Code is amended to read:

35781. (a) Except as otherwise provided in this article, market milk shall not contain any of the following:

(1) More than 15,000 bacteria per milliliter *or more than 10 coliform bacteria per milliliter* if to be sold as raw milk to the consumer. (Emphasis added).

20. The purpose of the coliform test is not to detect the presence of pathogens that cause illness to humans.

21. A coliform test is more of a quality analysis/quality control general monitor for changes in the extent of contaminants.

22. According to the Centers for Disease Control and Prevention, the “infective dose” is the amount of a pathogen in a food that would need to be present before consumption of that food would likely cause an illness in a human.

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23. According to the CDC, the following pathogens have the indicated infective doses:

salmonella	15 to 20
<i>Campylobacter jejuni</i>	400 to 500
<i>E. coli</i> O157:H7	10
<i>Listeria monocytogenes</i>	1,000

24. Coliforms are organisms that grow in a defined media at a specific temperature in time.

25. Milk is an excellent medium for coliform growth.

26. However, subtle increases in temperature can cause enormous increases in coliform count in a milliliter of milk over time.

27. For example, a package of raw milk that is shipped under appropriate conditions may be placed on a grocery store shelf that is not properly refrigerated, causing an increase in the number of coliforms present over time.

28. In addition, several packages of raw milk may be so closely packed together on a shelf in a grocery store that the inside packages of raw milk are not adequately refrigerated, another cause of increased coliforms present over time.

29. For example, data and studies have shown that in milk the number of *E. coli*, which is a coliform, will double in 20 minutes at 37 degrees centigrade.

30. Consequently, the number of coliforms in a package of raw milk can change significantly over time, regardless of how it was produced, handled or packaged.

31. A more proper standard would be the absence of pathogens in the bulk tank where the raw milk is stored prior to packaging.

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32. Based on my training, education and experience, it is my professional, expert opinion that the standard for coliforms in AB1735 is arbitrary and does not protect human health.

33. Based on my training, education and experience, it is my professional, expert opinion that the standard for coliforms in AB1735 lacks the necessary scientific foundation to be supportable as a requirement for food safety.

34. Based on my training, education and experience, it is my professional, expert opinion that there is no rational relationship between protecting human health and the standard for coliforms in AB1735.

FURTHER AFFIANT SAYETH NAUGHT

Theodore F. Beals, MD

Sworn and subscribed before me in my presence, this _____ day of February, 2008.

Notary Public