

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF IOWA
WESTERN DIVISION

DEBORAH DAUGHETEE and STEVEN
DAUGHETEE,

Plaintiffs,

vs.

CHR. HANSEN, INC., a Wisconsin
Corporation; FIRMENICH, INC., a
Delaware Corporation; and SYMRISE,
INC., a New Jersey Corporation,

Defendants.

No. C09-4100-MWB

MEMORANDUM OPINION AND
ORDER REGARDING DEFENDANTS'
MOTIONS FOR SUMMARY
JUDGMENT

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This case brings to mind the idiom, “Too much of a good thing can be bad for you.” In this diversity action under Iowa products liability law, plaintiffs allege that Deborah Daughetee developed “popcorn lung” by consuming multiple bags of microwave popcorn daily for several years. Presently, I am asked to determine whether the plaintiffs are entitled to present to a jury both their failure to warn and design defects claims generally, and as to a specific brand of microwave popcorn. These questions, and others, are presented by the defendants’ motions for summary judgment.

I. INTRODUCTION AND BACKGROUND

A. Factual Background

As is my usual practice, I set out only those facts, disputed and undisputed, sufficient to put in context the parties' arguments concerning the defendants' motions for summary judgment. Unless otherwise indicated, the facts recited here are undisputed, at least for the purposes of summary judgment. I will discuss additional factual allegations, and the extent to which they are or are not disputed or material, if necessary, in my legal analysis.

1. The parties and principal actors

Plaintiffs Deborah Daughetee and Steven Daughetee are married and residing in Albuquerque, New Mexico. Defendant Symrise, Inc. ("Symrise") is a New Jersey corporation with its principal place of business outside of Iowa or New Mexico. Symrise was created in 2002 by merging with, and assuming the liabilities of, Dragoco, Inc. ("Dragoco"). Defendant Firmenich is a Delaware corporation with its principal place of business outside of Iowa or New Mexico. Defendant Chr. Hansen, Inc. ("Hansen") is a Wisconsin corporation with its principal place of business outside of Iowa or New Mexico. Symrise, Firmenich, and Hansen (collectively "defendants") all produced butter flavorings containing diacetyl.

The Flavor and Extract Manufacturers Association ("FEMA") is a trade association for flavor manufacturers. Symrise, Dragoco, and Firmenich were FEMA members. The Popcorn Board is an industry association created to promote, *inter alia*, research related to popcorn.

Diacetyl is a basic food chemical present in all cheeses and butters. It is an ingredient used to manufacture butter flavorings. Diacetyl is one of a number of potentially volatile organic compounds present in butter flavorings. Butter flavorings

are intended to provide “buttery” taste and smell. Upon opening a microwave popcorn bag with butter flavoring, diacetyl vapors are released.

Defendants sold their butter flavorings to microwave popcorn manufacturers, including ConAgra, General Mills, and American Popcorn. General Mills and ConAgra have been aware, since the 1990’s, that defendants’ butter flavorings contained diacetyl. ConAgra is the largest manufacturer of microwave popcorn in the United States. It operates five microwave popcorn factories and has been in the microwave popcorn business since the 1980’s. In addition to defendants, ConAgra also purchased flavorings from Givaudan, and International Flavors and Fragrances.¹

Hansen flavoring products were used in ConAgra’s ACT II Butter and ACT II Movie Theater microwave popcorns. Symrise shipped butter flavorings to the General Mills plant in Iowa City. Symrise’s butter flavorings were used in microwave popcorn manufactured by General Mills and ConAgra. Symrise’s butter flavorings were used in General Mills’s Pop Secret Movie Theater popcorn and Pop Secret Butter popcorn. Firmenich’s butter flavoring was used in only one brand of popcorn that Deborah consumed—General Mills’ Pop Secret Movie Theater microwave popcorn. Firmenich butter flavorings were never present in any ConAgra brand of microwave popcorn consumed by Deborah.

Dragoco sold and shipped butter flavorings to ConAgra in the early 1990’s in a liquid form. In approximately September 1994, ConAgra began using Givaudan flavorings in its ACT II Butter Lover’s microwave popcorn. Prior to that, for a period of time, ACT II Butter Lover’s microwave popcorn contained a flavoring manufactured by Dragoco. The parties dispute the length of time that Dragoco supplied butter

¹At the time, Givaudan was called Tastemaster. I will refer to the company only as Givaudan.

flavorings for ACT II Butter Lover's microwave popcorn. ConAgra stopped using Dragoco butter flavorings because Givaudan's flavorings were less expensive.

2. *Deborah's consumption of microwave popcorn*

Between 1989 and 2004, Deborah regularly ate microwave popcorn. From 1989 to 2004, she prepared and consumed approximately one or two bags of microwave popcorn each day. Deborah prepared a "Product Identification" Sheet ("Product ID Sheet") in which she identified the brands of microwave popcorn she has eaten since 1989. Deborah prepared the Product ID Sheet based on her recollection of the various brands she consumed. She identified various brands manufactured by General Mills, ConAgra, and American Popcorn. Specifically, she recalled consuming the following brands and varieties: ACT II Butter; ACT II Butter Lover's; ACT II Movie Theater; Jolly Time Butter; Jolly Time Butterlicious; Jolly Time White and Buttery; Jolly Time Blast O Butter; Pop Secret Butter; Pop Secret Movie Theater; Orville Redenbacher Butter; and, Orville Redenbacher Movie Theater Butter. Her favorite brands, in descending order, were ACT II, Orville Redenbacher, Pop Secret, and Jolly Time. Deborah believes that during between 1989 and 2004, 50 to 60% of the microwave popcorn she consumed was ACT II, 25 to 30% was Orville Redenbacher, 20% was Pop Secret, and 5% was Jolly Time.

After removing a bag of butter flavored microwave popcorn from the microwave, Deborah would open the bag and draw the buttery smell into her nose and lungs. She "liked the smell of opening a bag near my face," and liked the taste of butter flavored, microwave popcorn. Deborah first ate microwave popcorn in 1989 while working as a writer for the television show "Tour of Duty." She prepared and ate two bags of microwave popcorn while she worked on Tour of Duty. Typically, she would eat one bag at the office and then take another bag home with her. Similarly, she ate between one and two bags of microwave popcorn while working on the

television show “Renegade.” Deborah first ate ACT II microwave popcorn while she was working on “the trials of Rosie O’Neil” but cannot state a precise date when she began eating ACT II Butter Lover’s popcorn. Deborah is unable to specify what percentage of her popcorn consumption of ACT II microwave popcorn was made up of ACT II Butter Lover’s popcorn. Between 1989 and 1995, Deborah purchased ACT II popcorn from Costco. She also remembers individual bags of ACT II popcorn being available at Blockbuster, but is not sure when. Deborah stopped eating popcorn in 2004 because she grew tired of it.

3. Activities with the popcorn industry

One of FEMA’s standing committees is the Safety Evaluation Coordination Committee. The committee’s responsibility is:

To direct and oversee all safety evaluation activities of the Association, and to monitor safety evaluation activity, wherever it occurs, related to flavors. To initiate or cooperate in initiating in activities related to, and supporting, competent and effective safety evaluation of flavors. To coordinate the safety evaluation activities of the Board of Governors, the Expert Panel, other committees of the Association, and outside organizations include governmental agencies, scientific and academic institutions and other industry groups.

Membership Directory at 26; Plaintiffs’ App. at 72. The Flavor and Ingredients Committee gathered information about ingredients through surveys and identified abnormalities. The Flavor and Ingredients Committee did not sponsor any original studies. Information gathered was distributed to other FEMA committees. Prior to 1997, no FEMA committee had examined whether a product could be hazardous when inhaled.

Fred Stults, Firmenich’s Vice President and Technical Director for Flavors, was FEMA’s president-elect from 1996 to 1997 and became FEMA’s president in 1997.

He was also on FEMA's board of governors and served on FEMA's Safety Evaluation Committee from approximately 1984 to 2007. Daniel Stebbins worked for Dragoco from 1973 to 2003, and, after the merger, for Symrise through March 2004. At times during the 1990's, Stebbins served as the secretary, vice president, and president of FEMA's board of governors. Stebbins served as Dragoco's representative to FEMA in 1996 and 1997, while Dragoco's North American division president. Klaus Bauer, Dragoco's vice president of product development served as chairman of FEMA's Flavor Ingredients Committee in 1997.

Symrise and Firmenich, as FEMA members, had access to health hazard information published by FEMA. Among the health hazard information FEMA publishes for its members are Flavor and Fragrance Ingredient Data Sheets ("FFIDS") and Material Safety Data Sheets ("MSDS") for the flavoring chemicals. At various times, Symrise and Firmenich employees were members and/or officers of FEMA, and served on FEMA committees. In 1985, FEMA issued a FFIDS for diacetyl which stated that, upon inhalation, diacetyl was "harmful" and high concentrations were "capable of producing systemic toxicity." FFIDS at 2; Plaintiffs' App. at 76.

In 1986, the National Institute for Occupational Safety and Health ("NIOSH") published a study regarding a Health Hazard Evaluation involving bronchiolitis obliterans at an International Bakers plant in Indiana. The NIOSH's report concluded that two workers at the plant had been diagnosed with lung injuries clinically consistent with bronchiolitis obliterans or emphysema. The NIOSH's 1986 International Bakers report stated: "In the absence of specific identified etiology for the two cases of severe obstructive lung disease, every attempt should be made to control airborne dust exposure in the mixing room." 1986 NIOSH Report; Defendants' App. at 706-07. The NIOSH report makes no reference or recommendation regarding exposure to "vapors, mists or fumes" which could arise from evaporating liquid.

In approximately 1991, Fred Stults, Firmenich's Vice President and Technical Director for Flavors prepared a Chemical Hygiene Plan ("CHP") for Firmenich. The CHP contained a section called "Working with Chemicals of Potent Inhalation Hazard." Diacetyl was among the chemicals listed in that section. The CHP required a "special label" for the listed chemicals which included a picture of a nose inhaling vapors and the warning: "Inhalation hazard do not inhale." CHP at 10; Plaintiffs' App. at 200. The CHP also cautions: "Use and store these substances only in a well-ventilated area or a hood or other containment device for procedures which may result in the generation of aerosols or vapors containing the substances. *Id.* Firmenich did not use the "special label" on any of the labels of products that it sold to General Mills. In 1992, Givaudan discovered that one or more of its employees had been diagnosed with bronchiolitis obliterans and that one of the employees may have died as a result. Givaudan's discovery led to the creation of an internal task force to investigate the potential for lung injury at the Givaudan plant. Givaudan established safety procedures, including the use of respirators for workers exposed to diacetyl or diacetyl-containing products. In 1993, the Givaudan task force reported that diacetyl could be the cause of bronchiolitis obliterans and that further studies should be conducted. As part of Givaudan's investigation it retained Dr. Stuart Brooks. In 1994, Brooks confirmed the bronchiolitis obliterans diagnosis in two employees and recommended steps in the investigation to determine the cause and prevent further exposures. Also in 1994, Givaudan retained experts from the University of Cincinnati to investigate the level of lung disease among Givaudan employees. The specialist included Roy McKay, a pulmonary toxicologist; Dr. James Lockey, an occupational medicine physician; and Susan Pinney, an epidemiologist.

Some General Mills's employees began experiencing skin irritation problems in the mid 1990's. In investigating this skin irritation problem, General Mills contacted

Givaudan for advice on butter flavoring products and industrial hygiene. At the request of General Mills, Givaudan representatives came to its plant in Iowa City. Givaudan advised General Mills on how to protect workers from skin irritation but never told General Mills that Givaudan always required its workers to wear respirators when working with diacetyl. General Mills asked Givaudan if inhaling butter flavoring was hazardous and was told it was not hazardous.

On July 22, 1996, Mike Davis, Givaudan's President, and Givaudan's toxicologist, Nancy Davis, met with John Hallagan, a science advisory and attorney for FEMA to tell FEMA that one or more Givaudan employees had been diagnosed with bronchiolitis obliterans. On September 27, 1996, Givaudan General Counsel Karen Duros and Dr. Lackey met with Hallagan again to educate FEMA on bronchiolitis obliterans and what was happening at the Givaudan plant. Hallagan, in turn, advised FEMA's board of governors that employees of a member flavor company had been diagnosed with possible bronchiolitis obliterans and that FEMA should provide a seminar for its members on occupational lung disease and respiratory protection.

In late, 1996, FEMA's board of governors held a meeting at which Givaudan's disclosure was discussed. FEMA's executive director and Dan Thompson, an attorney, gave an oral report. FEMA decided to hold the 1997 FEMA Seminar after this meeting regarding Givaudan's disclosure.² Davis began serving on FEMA's board of governors in 1997 and continued to serve until at least 2007.

In 1997, FEMA sponsored a seminar entitled "Respiratory Safety in the Flavor and Fragrance Workplace" ("the 1997 FEMA Seminar"). Hansen was not present at the seminar. Dr. Cecille Rose, an occupational medicine physician from the National Jewish Health Center, and John Martyny, a certified industrial hygienist, spoke at the

²Givaudan's identity was kept secret and it was referred to as "Company X" in FEMA documents. Five years later, Stebbins learned that Company X was Givaudan.

1997 FEMA Seminar. Rose and Martyny addressed respiratory safety in the flavor industry. Stults, William Troy, and Gordon Ruiterman were registered to attend the seminar for Firmenich. Stults reviewed the 1997 FEMA Seminar materials. Klaus Bauer, Mervyn Brown, Salvatore Cascone, Lawrence Dinkinson, Thomas Karnis, Philip Mingle, James Olano, Luis Olano, Jesus Pardon, Mohan Pradhan, Gene Rachelski, and Andrea Swoboda were registered to attend the seminar for Dragoco. Bauer reviewed the 1997 FEMA seminar materials. By the end of the seminar, both Stults and Bauer were aware of a possible case of bronchiolitis obliterans at a FEMA member plant.

In preparation for the 1997 FEMA Seminar, FEMA shared with Rose information regarding a case of bronchiolitis obliterans and NIOSH's 1986 International Baker's plant study. Rose conducted a literature search to familiarize herself with the flavor process, potential exposures, and to determine whether there was a specific chemical commonly used in flavorings that had been associated with bronchiolitis obliterans. Rose did not find a chemical commonly used in flavorings that had previously been associated with bronchiolitis obliterans. One of Rose's objectives for the 1997 FEMA Seminar was to gather information from FEMA members regarding lung hazards that they were working with or had discovered in their plants.

No speaker at the 1997 FEMA Seminar stated that diacetyl exposure caused or was suspected of causing bronchiolitis obliterans. NIOSH's 1986 International Baker's plant study was attached to the seminar materials. The seminar materials included a section that listed the causes of bronchiolitis obliterans. The seminar materials did not discuss diacetyl as a cause or suspected cause of bronchiolitis obliterans.

Following the 1997 FEMA Seminar, Firmenich did not conduct any research to determine if the chemicals it was using in its products could be hazardous to their consumers' health. Prior to June 2000, Firmenich had not conducted any animal study

to determine whether flavoring ingredients were hazardous. Also prior to June 2000, Firmenich did not perform or commission any studies concerning human health aspects of inhalation of its butter flavorings or diacetyl.

Following the 1997 Seminar, Dragoco conducted no investigation to determine if any chemicals it was using could cause bronchiolitis obliterans. Dragoco did not employ a toxicologist prior to June 2000. Symrise and/or Dragoco did not sponsor an animal study to determine if any flavoring ingredients were hazardous prior to June 2000. Dragoco did not conduct tests concerning human health aspects of inhalation of its butter flavorings or diacetyl. Symrise has not conducted a study regarding inhalation of diacetyl among its employees.

Dragoco provided information to General Mills about its butter flavorings in October 1997, a few months after the 1997 FEMA Seminar. General Mills asked Dragoco questions about the safety of its products several times between 1988 and 1998. Dragoco did not inform General Mills about the 1997 FEMA Seminar. Dragoco prepared and sent a MSDS to General Mills for Dragoco's butter flavorings, which reflected that the butter flavorings could cause irritation upon inhalation. Dragoco's MSDS did not warn that exposure to its butter flavorings could cause bronchiolitis obliterans. Similarly, Firmenich's MSDS for a butter flavoring it sold to General Mills stated: "Vapor may be irritating to eyes, nose, throat, and respiratory tract. Breathing high concentrations of vapor may cause coughing and sore throat." Firmenich MSDS at 2; Plaintiffs' App. at 163.

In 1996-1997, no representative from any FEMA member company, other than Givaudan, disclosed to FEMA that they had any workers diagnosed with bronchiolitis obliterans. FEMA took a survey within the industry to determine whether any other company had an experience similar to Givaudan. The survey disclosed no other

company. As of June 2000, no documents existed in public literature which attributed inhalation of diacetyl vapor with bronchiolitis obliterans.

Under the National Fire Protection Association (NFPA), a health hazard rating of “1” represents “[m]aterial that on exposure would cause irritation but only minor residual injury.” NFPA 704 Health Hazard Rating System at 2; Plaintiffs’ App. at 171. A health hazard rating of “1” means “slightly hazardous (toxic) material.” NFPA 704 Health Hazard Rating System at 3; Plaintiffs’ App. at 172. Firmenich’s MSDS for its butter flavorings indicated a health hazard rating of 1. Symrise’s MSDS for its butter flavorings sold to General Mills stated that its butter flavorings were an inhalation irritant.

A label identifying a product as an “inhalation hazard” indicates that the product is potentially dangerous or harmful. Dragoco did not place respiratory hazard warnings on the drums of butter flavorings sold to General Mills’s Iowa City plant. General Mills hired ventilation consultants in 1999 to install exhaust hoods at its Iowa City plant. Subsequently, a General Mills’s employee, Vicki Stillmunkes, claimed to have developed a lung condition at General Mills’s Iowa City plant.

FEMA’s Flavor Ingredients Committee did not conduct health or safety studies. In 1997, no FEMA committee was responsible for determining whether or not chemicals could be hazardous when inhaled. As of 1997, no list existed of flavor and/or fragrance ingredients that could pose respiratory hazards in the workplace.

In August 2000, NIOSH performed a Health Hazard Evaluation of the Gilster-Mary Lee microwave popcorn plant in Jasper, Missouri. NIOSH conducted a medical survey of Gilster-Mary Lee plant workers, quantitative industrial hygiene surveys, respiratory training and fit testing of certain plant workers, and animal exposure studies of butter flavorings. The NIOSH investigation included Gilster-Mary Lee’s quality control room. In its interim report, NIOSH found elevated rates of chronic cough,

shortness of breath, obstructive spirometry abnormalities, asthma, chronic bronchitis, breathing trouble, and fatigue among plant workers. NIOSH also found “[s]trong exposure-response relationships existed between quartile of estimated cumulative exposure to diacetyl and respiratory dust and frequency and degree of airway obstruction.” Interim Report at 2; Plaintiffs’ App. at 301.

After conducting follow-up testing at Gilster-Mary Lee, NIOSH considered the quality control room to be “an additional high risk area” in which “5 of the 6 workers had airways obstruction.” Interim Letter Report at 2; Plaintiffs’ App. at 348. NIOSH noted that: “[Quality control] workers are repeatedly exposed for intervals of several seconds up to several minutes to elevated organic vapor concentrations by work processes throughout the shift.” *Id.* The NIOSH reported three sources for the vapors: “microwave oven fan exhaust during cooking of the corn”; “Bursts of steam and flavoring vapors ejected as bags are opened”; and “Vapors rising from corn while being loaded into graduated cylinders.” *Id.* The NIOSH also noted that the quality control room “ventilation system is not adequate to remove the volatile compounds generated through QC testing.” Interim Letter Report at 3; Plaintiffs’ App. at 349. NIOSH made safety recommendations specific to the quality control room to improve air quality and reduce worker exposures.

On August 2, 2002, NIOSH provided a “Worker Update” concerning its testing at the Gilster-Mary Lee plant. The update states that “[w]e believe butter flavoring in the air caused lung disease in workers at this plant.” Worker Update at 2; Plaintiffs’ App. at 359. The NIOSH update made the following observation concerning quality control exposures:

Many quality control workers had abnormal breathing tests and have continued risk even after the ventilation changes in the plant. Based on our survey results, we believe that they may receive many peak exposures to flavoring vapors when

microwaving the popcorn bags, opening them, and measuring the amount of hot popcorn. When the popcorn/flavorings temperature increased, the vapor increased, although the high exposures only lasted for seconds or a few minutes. We are concerned about these short peak exposures in the quality control room and have provided recommendations for control.

Worker Update at 3; Plaintiffs' App. at 360.

In 2001, the Wall Street Journal published an article about employees who worked with butter flavorings at the Gilster-Mary Lee plant developing lung disease. After that article was published, in 2001, a Firmenich employee was found to have had a decline in his pulmonary function test. The Firmenich employee was referred to Dr. Robert Krukltis. On March 25, 2002, Dr. Krukltis noted in a letter to another doctor that the worker had "obstructive airway disease/constrictive bronchiolitis." Letter at 3; Plaintiffs' App. at 153. Dr. Krukltis also offered the following observation:

However, it is noteworthy that at least eight other individuals have developed an apparently similar condition while working in the Gilster/Marilee Corporation, a plant in which artificial butter flavorings are made. In fact, [the employee] states that artificial butter flavoring is also made at his plant, and he has participated on several occasions in the process. Given these facts and his lack of other obvious etiology, we are very suspicious that the constrictive bronchiolitis is secondary to exposure to one or more chemicals which [the employee] has been exposed.

Letter at 3; Plaintiffs' App. at 153.

ConAgra become aware of any association between exposure to diacetyl in the workplace and certain lung diseases in 2001. It was alerted about the association by newspaper articles about NIOSH's investigation into reported lung disease among workers at the Gilster-Mary Lee microwave popcorn plant in Jasper, Missouri. On October 3, 2001, Jack McKeon, head of ConAgra's snack food division, sent a memo

to all ConAgra employees advising them about NIOSH's investigation at the Gilster-Mary Lee microwave popcorn plant. A week after becoming aware of the association between exposure to diacetyl and certain lung diseases, a ConAgra representative attended the October 2001 Popcorn Board meeting. During this meeting, NIOSH representatives discussed their investigation of the Gilster-Mary Lee microwave popcorn plant. Five days after the meeting, ConAgra received from the Popcorn Board a draft of a personal protection equipment "tip sheet" regarding how to protect microwave popcorn factory workers from butter flavoring fumes. A week after receiving the first "tip sheet," ConAgra received a second "tip sheet" from the Popcorn Board. This "tip sheet" addressed how to provide adequate ventilation in microwave popcorn plants. Beginning in 2001, ConAgra implemented a number of safety precautions in its microwave popcorn plants to protect workers from butter flavoring vapors. Following the October 2001, Popcorn Board meeting, ConAgra made no changes to its products' packaging.

In May 2002, NIOSH stated in a fact sheet that it was "unclear what role diacetyl may or may not play in the development of respiratory illness in workers exposed to the flavoring." NIOSH EVALUATES WORKER EXPOSURES AT A POPCORN PLANT IN MISSOURI, at 2; Firmenich-Symrise App. at 189. NIOSH also noted that it was "not aware of any evidence to suggest danger to consumers in the preparation and consumption of microwavable popcorn." *Id.*

By 2003, NIOSH started to conduct investigations at several of ConAgra's microwave popcorn plants. In March 2003, NIOSH conducted a medical survey of ConAgra's workers. NIOSH's survey identified workers with evidence of lung disease of the same type seen in workers who mixed oil and flavorings in other microwave popcorn plants. NIOSH made recommendations to ConAgra regarding how to protect workers from exposure to butter flavorings. ConAgra implemented NIOSH's

recommendations and began conducting medical monitoring of its employees. In mid-2003, ConAgra assembled a panel of experts to develop a Consumer Exposure Risk Index to address the potential health concerns. The panel included expertise in inhalation toxicology, chemical and structure activity and pulmonology, and occupational medicine. By the end of 2003, a number of ConAgra workers had filed lawsuits alleging that they suffered lung disease as a result of exposure to butter flavorings. Throughout 2003 and 2004, ConAgra increased ventilation and installed fume hoods in the quality assurance labs, and research and development labs of several of its microwave popcorn plants. In 2004, ConAgra hired Aspen Research Corporation (“Aspen”) to perform a study that measured the amount of diacetyl released when cooking microwave popcorn. The study included ACT II Butter Lover’s popcorn. In May 2005, Aspen provided ConAgra with the final report of its 2004 study. Aspen’s 2005 report was not released to the public because it contained information ConAgra considered proprietary. As of October 2004, ConAgra’s ACT II Butter Lover’s popcorn did not contain any warnings to consumers that exposure to the butter fumes could cause serious lung injury. As of 2004, ConAgra had not conducted any studies evaluating diacetyl emissions from ConAgra microwave popcorn in a simulated consumer home environment. ConAgra continued to use diacetyl in its butter flavorings as an ingredient in its microwave popcorn until 2007.

In January 2006, NIOSH released a report on a cluster of bronchiolitis obliterans cases in former workers at the Gilster-Mary Lee microwave popcorn plant in Jasper, Missouri. In the report, NIOSH noted that:

When NIOSH began its investigation in August 2000, there were no reports in published scientific literature that indicated a risk of occupational lung disease in this work setting. Plain kernel popcorn has been packaged for sale for many decades. However, the production of microwave popcorn with butter flavorings did not start until the mid to

late 1980's. While it was known that some butter flavoring chemicals such as diacetyl could cause eye and respiratory irritation, the potential for development of lung disease from their inhalation had not been previously reported.

NIOSH HEALTH HAZARD EVALUATION REPORT 2000-0401-2991, GILSTER-MARY LEE CORPORATION, JASPER, MO. (January 2006), at 11; Firmenich-Symrise App. at 110. The NIOSH concluded that: "With the exposure controls implemented to date, workers in the microwave popcorn packaging area should now be at minimal risk as long as isolation of the mixing room and mezzanine is maintained and all ventilation systems are operational." *Id.* at v.; Firmenich-Symrise App. at 98.

In 2007, the Environmental Protection Agency ("EPA") conducted "the first study to take a comprehensive look at chemicals released while microwaving an entire conventional microwave popcorn product" ("the Rosati Study"). Rosati Study at 701; Plaintiffs' App. at 362. The Rosati Study "Identified and quantified chemical emissions released in the process of popping and opening a bag of microwave popcorn." *Id.* The study noted that quality control personnel popping the popcorn and opening the bags "had a high incidence of respiratory and dermal symptoms." *Id.* The study found that "chemicals continue to be released from microwave popcorn after bag opening." Rosati Study at 706; Plaintiffs' App. at 367.

Hansen used diacetyl in manufacturing butter flavorings until 2008. Hansen did not conduct any studies to see if diacetyl and/or starter distillate was safe when inhaled. Hansen conducted no independent toxicological research regarding diacetyl. Hansen also conducted no research into the emissions released by microwave popcorn when cooked.

B. Procedural Background

On May 10, 2010, plaintiffs Deborah Daughetee and Steven Daughetee (“the Daughetees”) filed their First Amended Complaint against defendants, all manufacturers of microwave popcorn butter-flavorings, alleging claims of negligence, breach of warranty, and loss of consortium. Plaintiffs’ claims all stem from Deborah’s alleged respiratory injury resulting from her exposure to popcorn containing butter flavorings containing diacetyl. The parties are before me by virtue of diversity of citizenship. *See* 28 U.S.C. § 1332.

Symrise and Firmenich have filed the following motions for summary judgment: (1) Joint Motion For Summary Judgment On Plaintiffs’ Failure To Warn Claims (No Duty To Warn) (docket no. 282); (2) Joint Motion For Summary Judgment On Plaintiffs’ Failure To Warn Claims (No Proximate Cause) (docket no. 285); (3) Symrise’s Motion For Summary Judgment On Punitive Damages (docket no. 286); (4) Joint Motion For Summary Judgment On Breach Of Implied Warranty Claim (docket no. 287); and (5) Symrise’s Motion For Summary Judgment As To Plaintiff’s Alleged Exposure To Symrise Butter Flavor In ConAgra Microwave Popcorn (docket no. 289). Firmenich joined Symrise’s motion on punitive damages and Hansen has joined all of the motions except the ACT II Butter Flavor motion.

In their Joint Motion For Summary Judgment On Plaintiffs’ Failure To Warn Claims (No Duty to Warn), defendants make three arguments. First, defendants contend that they did not owe Deborah a duty to warn about the harms allegedly associated with exposure to their butter flavorings because, during the time that Deborah ate microwave popcorn containing their flavorings, it was not reasonably foreseeable that their flavorings posed a risk to consumers. Second, defendants assert that because General Mills and ConAgra were sophisticated users of flavoring products, General Mills and ConAgra were in a better position to warn consumers of their

products. Finally, defendants argue that they were bulk suppliers of flavorings ingredients and were not in a position to warn consumers of General Mills and ConAgra's microwave popcorn about the dangers associated with the finished popcorn products.

In their Joint Motion For Summary Judgment On Plaintiffs' Failure To Warn Claims (No Evidence Of Proximate Cause), defendants contend that the Daughetees cannot establish that Deborah's exposure to defendants' butter flavorings in General Mills and ConAgra's microwave popcorn caused her lung disease. Defendants argue that the Daughetees cannot establish the required causation evidence through expert testimony. Defendants further assert that, even if the Daughetees could muster the required expert causation evidence, the Daughetees' failure to warn claims fail as a matter of law because there is no evidence that any alleged failure to warn was the proximate cause of Deborah's injuries. Finally, defendants seek summary judgment based on any failure to warn that occurred after February 2000 because any warning after that date would have no causal relationship to Deborah's alleged diagnosis.

In their Joint Motion For Summary Judgment On Breach Of Implied Warranty Claim, defendants make three arguments. First, defendants contend that the breach of implied warranty is redundant of the Daughetees' negligent claims. Second, defendants argue that the Daughetees have offered no proof of a product defect, and, therefore, they cannot sustain a breach of implied warranty claim. Finally, defendants seek summary judgment on any claim based on any breach that occurred after February 2000 because any breach after that date would have no causal relationship to Deborah's alleged diagnosis.

In its Motion For Summary Judgment As To Plaintiff's Alleged Exposure To Symrise Butter Flavor In ConAgra Microwave Popcorn, Symrise asserts that the Daughetees cannot prove that her lung disease was caused by Dragoco butter flavorings

contained in ConAgra ACT II Butter Lover's microwave popcorn. Symrise further argues that any claim based on Deborah's exposure to Dragoco butter flavorings contained in ConAgra ACT II Butter Lover's microwave popcorn is barred under Iowa's statute of repose, Iowa Code § 614.1. In its Motion For Summary Judgment On Punitive Damages, Symrise contends that it is entitled to summary judgment on the Daughetees' claims for punitive damages because no evidence exists that Symrise willfully and wantonly disregarded Deborah's safety.

The Daughetees filed a single, unified resistance to all of defendants' motions for summary judgment. Defendants filed timely reply briefs in support of their motions on February 19-20, 2013.

II. LEGAL ANALYSIS

A. Summary Judgment Standards

Motions for summary judgment essentially "define disputed facts and issues and . . . dispose of unmeritorious claims [or defenses]." *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 585 (2007) (internal quotation marks and citation omitted); *see Celotex Corp. v. Catrett*, 477 U.S. 317, 323-24 (1986) ("One of the principal purposes of the summary judgment rule is to isolate and dispose of factually unsupported claims or defenses. . . ."). Summary judgment is only appropriate when "the pleadings, depositions, answers to interrogatories, and admissions on file, together with affidavits, if any, show that there is no *genuine* issue of *material* fact and that the moving party is entitled to a judgment as a matter of law." FED. R. CIV. P. 56(c) (emphasis added); *see Woods v. DaimlerChrysler Corp.*, 409 F.3d 984, 990 (8th Cir. 2005) ("Summary judgment is appropriate if viewing the record in the light most favorable to the nonmoving party, there are no genuine issues of material fact and the moving party is entitled to judgment as a matter of law.").

A fact is *material* when it “‘might affect the outcome of the suit under the governing law.’” *Johnson v. Crooks*, 326 F.3d 995, 1005 (8th Cir. 2003) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). Thus, “the substantive law will identify which facts are material.” *Anderson*, 477 U.S. at 248. An issue of material fact is *genuine* if it has a real basis in the record, *Hartnagel v. Norman*, 953 F.2d 394, 395 (8th Cir. 1992) (citing *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586-87 (1986)), or when “‘a reasonable jury could return a verdict for the nonmoving party’ on the question,” *Woods*, 409 F.3d at 990 (quoting *Anderson*, 477 U.S. at 248); see *Diesel Machinery, Inc. v. B.R. Lee Indus., Inc.*, 418 F.3d 820, 832 (8th Cir. 2005) (stating genuineness depends on “whether a reasonable jury could return a verdict for the non-moving party based on the evidence”).

Procedurally, the moving party bears “the initial responsibility of informing the district court of the basis for its motion and identifying those portions of the record which show a lack of a genuine issue,” *Hartnagel*, 953 F.2d at 395 (citing *Celotex*, 477 U.S. at 323), and demonstrating that it is entitled to judgment according to law. See *Celotex*, 477 U.S. at 323 (“[T]he motion may, and should, be granted so long as whatever is before the district court demonstrates that the standard for the entry of summary judgment, as set forth in Rule 56(c), is satisfied.”). Once the moving party has successfully carried its burden under Rule 56(c), the nonmoving party has an affirmative burden to go beyond the pleadings and by depositions, affidavits, or otherwise, designate “specific facts showing that there is a genuine issue for trial.” FED. R. CIV. P. 56(e); *Mosley v. City of Northwoods, Mo.*, 415 F.3d 908, 910 (8th Cir. 2005) (“The nonmoving party may not ‘rest on mere allegations or denials, but must demonstrate on the record the existence of specific facts which create a genuine issue for trial.’” (quoting *Krenik v. County of Le Sueur*, 47 F.3d 953, 957 (8th Cir. 1995))).

As the Eighth Circuit Court of Appeals has explained,

“On a motion for summary judgment, ‘facts must be viewed in the light most favorable to the nonmoving party only if there is a genuine dispute as to those facts.’” *Ricci v. DeStefano*, ---U.S. ----, 129 S. Ct. 2658, 2677, 174 L. Ed. 2d 490 (2009) *quoting* *Scott v. Harris*, 550 U.S. 372, 380, 127 S. Ct. 1769, 167 L. Ed. 2d 686 (2007) (internal quotations omitted). “Credibility determinations, the weighing of the evidence, and the drawing of legitimate inferences from the facts are jury functions, not those of a judge.” *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150, 120 S. Ct. 2097, 147 L. Ed. 2d 105 (2000), *quoting* *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 106 S. Ct. 2505, 91 L. Ed. 2d 202 (1986). The nonmovant “must do more than simply show that there is some metaphysical doubt as to the material facts,” and must come forward with “specific facts showing that there is a genuine issue for trial.” *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586–87, 106 S. Ct. 1348, 89 L. Ed. 2d 538 (1986). “‘Where the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party, there is no genuine issue for trial.’” *Ricci*, 129 S. Ct. at 2677, *quoting* *Matsushita*, 475 U.S. at 587, 106 S. Ct. 1348.

Torgerson v. City of Rochester, 643 F.3d 1031, 1042-43 (8th Cir. 2011) (*en banc*).

Summary judgment is particularly appropriate when only questions of law are involved, rather than factual issues that may or may not be subject to genuine dispute. *See, e.g., Cremona v. R.S. Bacon Veneer Co.*, 433 F.3d 617, 620 (8th Cir. 2006). Consequently, I turn to consider the parties’ arguments for and against summary judgment.

B. Failure To Warn Claims

Defendants have filed two motions for summary judgment directed at the Daughetees’ failure to warn claims. In one, defendants challenge whether they had a

duty to warn Deborah about the harms allegedly associated with exposure to their butter flavorings. In the second, defendants contest the Daughetees' ability to establish that defendants' failure to warn Deborah was the proximate cause of her lung condition. I will take up defendants' motion related to whether they had a duty to warn and then, if necessary, defendants' motion concerning proximate cause.

1. Duty to warn

Under Iowa law, “[a]n actionable claim of negligence requires the existence of a duty to conform to a standard of conduct to protect others, a failure to conform to that standard, proximate cause, and damages.”³ *Pitts v. Farm Bureau Life Ins. Co.*, 818 N.W.2d 91, 98 (Iowa 2012) (quoting *Thompson v. Kaczinski*, 774 N.W.2d 829, 834 (Iowa 2009) (citation and internal quotation marks omitted)); see *McCormick v. Nikkel & Assoc.*, 819 F.3d 368, 371 (Iowa 2012) (same). The threshold question in a negligence case is whether defendants owed plaintiff a legal duty. *J.A.H. v. Wadle & Assoc., P.C.*, 589 N.W.2d 256, 258 (Iowa 1999); see also *Tinnian v. Yellow Book USA*, 745 N.W.2d 96, 2007 WL 4553643, at *1 (Iowa Ct. App. Dec. 28, 2007) (table opinion). As discussed above, defendants make three arguments in support of their claim that they had no duty to warn Deborah about the harms allegedly associated with exposure to their butter flavorings. First, defendants contend that they did not owe Deborah a duty to warn because, during the time that Deborah ate microwave popcorn containing their flavorings, it was not reasonably foreseeable that their flavorings posed a risk to consumers. Second, defendants assert that, because General Mills and ConAgra were sophisticated users of flavoring products, General Mills and ConAgra were in a better position to warn consumers about their products. Finally, defendants

³I need not make a determination as to a choice of laws in this case because the parties are in agreement that Iowa law is controlling on the issues raised by defendants' motions for summary judgment.

argue that they were bulk suppliers of flavorings ingredients and were not in a position to warn consumers of General Mills and ConAgra's microwave popcorn about the dangers associated with the finished popcorn products. I will take up each of these contentions, in turn, beginning with the foreseeability of the risk.

a. Foreseeability of risk

Under Iowa law, “[a] claim alleging a manufacturer failed to warn of the dangers involved in using a product is properly based on a theory of negligence, not strict liability.” *Mercer v. Pittway Corp.*, 616 N.W.2d 602, 623 (Iowa 2000); *see also Scott v. Dutton-Lainson Co.*, 774 N.W.2d 501, 504 (Iowa 2009) (“Failure to warn claims cannot be brought under a theory of strict liability.”); *Olson v. Prosoco, Inc.*, 522 N.W.2d 284, 289 (Iowa 1994) (“We believe that the correct submission of instructions regarding a failure to warn claim for damages is under a theory of negligence and the claim should not be submitted as a theory of strict liability.”). Consequently, under a theory of negligence the defendant must have owed a duty to the plaintiff. The issue of whether defendants owed a legal duty to Deborah is a question of law to be resolved by me. *See McCormick*, 819 F.3d at 371 (“‘Whether a duty arises out of a given relationship is a matter of law for the court's determination.’”) (quoting *Thompson*, 774 N.W.2d at 834); *see also Overturff v. Raddatz Funeral Servs., Inc.*, 757 N.W.2d 241, 245 (Iowa 2008); *Estate of Pearson ex rel. Latta v. Interstate Power & Light Co.*, 700 N.W.2d 333, 341 (Iowa 2005); *Lovick v. Wil-Rich*, 588 N.W.2d 688, 696 (Iowa 1999). However, whether a warning of a product danger should have been given is a question for the jury. *Beeman v. Manville Corp. Asbestos Disease Comp. Fund*, 496 N.W.2d 247, 252 (Iowa 1993).

Defendants' initial argument ties the issue of duty to the foreseeability of harm. However, the Iowa Supreme Court has held that “foreseeability should not enter into the duty calculus but should be considered only in determining whether the defendant

was negligent.” *McCormick*, 819 N.W.2d at 317; *see Thompson*, 774 N.W.2d at 835.

As the court explained in *Thompson*:

The assessment of the foreseeability of a risk is allocated by the Restatement (Third) to the fact finder, to be considered when the jury decides if the defendant failed to exercise reasonable care.

Foreseeable risk is an element in the determination of negligence. In order to determine whether appropriate care was exercised, the factfinder must assess the foreseeable risk at the time of the defendant's alleged negligence. The extent of foreseeable risk depends on the specific facts of the case and cannot be usefully assessed for a category of cases; small changes in the facts may make a dramatic change in how much risk is foreseeable.... [C]ourts should leave such determinations to juries unless no reasonable person could differ on the matter.

Id. at 97–98. The drafters acknowledge that courts have frequently used foreseeability in no-duty determinations, but have now explicitly disapproved the practice in the Restatement (Third) and limited no-duty rulings to “articulated policy or principle in order to facilitate more transparent explanations of the reasons for a no-duty ruling and to protect the traditional function of the jury as factfinder.” *Id.* at 98–99. We find the drafters' clarification of the duty analysis in the Restatement (Third) compelling, and we now, therefore, adopt it.

Thompson, 774 N.W.2d at 835 (quoting RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 7 cmt. j (Proposed Final Draft No.1, 2005)). Accordingly, I will consider defendants’ foreseeability argument only in determining whether defendants’ were negligent, keeping in mind that “[t]he factual issue of negligence is for the jury to resolve ‘and only in exceptional cases’ may it be decided as a matter of law.” *Turner v. Fransen*, No. 12-0055, 2013 WL 530499, at *5 (Feb. 13,

2013) (table decision) (quoting *City of Cedar Falls v. Cedar Falls Cmty. Sch. Dist.*, 617 N.W.2d 11, 16 (Iowa 2000)); see *Felderman v. city of Maquoketa*, 731 F.3d 676, 679 (Iowa 2007)

Defendants, as manufacturers, are held to have the knowledge of an expert and therefore should have known of the hazards inherent in their products. See *Beeman*, 496 N.W.2d at 252 (“As manufacturers, defendants are held to have the knowledge of experts; therefore they should have known of the hazards inherent in their asbestos products.”). In *Wright v. Brooke Group, Ltd.*, 652 N.W.2d 159 (Iowa 2002), the Iowa Supreme Court “adopted the Restatement (Third) of Torts: Products Liability sections 1 and 2 (1998).”⁴ *Scott*, 774 N.W.2d at 504; see *Wright*, 652 N.W.2d at 168. Section 1 of Restatement (Third) of Torts: Products Liability states:

⁴The parties have also directed me to § 388 of the Restatement (Second) of Torts. Prior to its adoption of Restatement (Third) of Torts: Products Liability § 2, Iowa had “adopted the standard set forth in section 388 of the Restatement (Second) of Torts for determining whether a manufacturer of goods has fulfilled its duty to warn of a product’s dangerous propensities.” *Lamb v. Manitowoc Co.*, 570 N.W.2d 65, 68 (Iowa 1997); see *Estate of Pearson ex rel. Latta*, 700 N.W.2d at 341 (“We have adopted the Restatement (Second) of Torts concerning the duty to warn by persons providing products for the use of others.”). Section 388 of the Restatement (Second) of Torts, states:

One who supplies directly or through a third person a chattel for another to use is subject to liability to those whom the supplier should expect to use the chattel with the consent of the other or to be endangered by its probable use, for physical harm caused by the use of the chattel in the manner for which and by a person whose use it is supplied, if the supplier

(a) knows or has reason to know that the chattel is or is likely to be dangerous for the use for which it is supplied, and

One engaged in the business of selling or otherwise distributing products who sells or distributes a defective product is subject to liability for harm to persons or property caused by the defect.

Restatement (Third) of Torts: Products Liability § 1 (1998). Section 2 states:

A product is defective when, at the time of sale or distribution, it contains a manufacturing defect, is defective in design, or is defective because of inadequate instructions or warning. A product:

(a) contains a manufacturing defect when the product departs from its intended design even though all possible care was exercised in the preparation and marketing of the product;

(b) is defective in design when the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design by the seller or other distributor, or a predecessor in the commercial chain of distribution, and the omission of the alternative design renders the product not reasonably safe;

(b) has no reason to believe that those for whose use the chattel is supplied will realize its dangerous condition, and

(c) fails to exercise reasonable care to inform them of its dangerous condition or of the facts which make it likely to be dangerous.

RESTATEMENT (SECOND) OF TORTS § 388 (1965). Section 388 is made applicable to manufacturers by § 394. *See Lamb*, 570 N.W.2d at 68. “The Restatement (Third) of Torts: Products Liability section 2(c) adopts a similar standard [to § 388] concerning the liability of a commercial seller or distributor for harm caused by a defective product.” *Estate of Pearson ex rel. Latta*, 700 N.W.2d at 341 n.1. To the extent there is a conflict between § 388 and § 2(c), I will look to § 2(c) for guidance here because this is a products liability case.

(c) is defective because of inadequate instructions or warnings when the foreseeable risks of harm posed by the product could have been reduced or avoided by the provision of reasonable instructions or warnings by the seller or other distributor, or a predecessor in the commercial chain of distribution, and the omission of the instructions or warnings renders the product not reasonably safe.

Id. at § 2.⁵

⁵The current version of Iowa Civil Jury Instruction No. 1000.3 (2010) formulates the elements of a product liability failure-to-warn claim, in light of Restatement (Third) § 2(c), as follows:

In order to recover on a claim that defendant's product was defective because of inadequate instructions or warnings, the plaintiff must prove all of the following propositions:

1. Defendant sold or distributed the (product);
2. The defendant was engaged in the business of selling or distributing the (product);
3. The foreseeable risks of harm posed by the (product) could have been reduced or avoided by the provision of reasonable instructions or warnings, in one or more of the following ways:

(Set out particulars as supported by the evidence).

4. The omission of the instruction(s) or warning(s) renders the (product) not reasonably safe;
5. The risk to be addressed by the instruction(s) or warning(s) was not obvious to, or generally known by, foreseeable product users;
6. The omission of the instruction(s) or warning(s) was a proximate cause of plaintiff's damages; and
7. The amount of damages.

“In testing the defendants' liability for negligence in failing to warn, the defendants should be held to the standard of care of an expert in its field.” *Wright v. Brooke*, 114 F. Supp.2d 797, 819 (N.D. Iowa 2000). “The relevant inquiry therefore is whether the reasonable manufacturer knew or should have known of the danger, in light of the generally recognized and prevailing best scientific knowledge, yet failed to provide adequate warning to users or consumers.” *Olson*, 522 N.W.2d at 290. Thus, reasonable foreseeability of danger to users of a product triggers the duty to warn. A manufacturer has no duty to warn when it did not or should not have known of the danger. *Lamb v. Manitowoc Co.*, 570 N.W.2d 65, 68 (Iowa 1997); *Moore v. Vanderloo*, 386 N.W.2d 108, 116 (Iowa 1986).

Defendants argue that there was no scientific or medical knowledge at the time Deborah was consuming microwave popcorn with butter flavorings which would have given them a reasonable basis to believe their product could cause injuries to consumers. The Daughetees counter that defendants had knowledge of the hazards associated with their butter flavorings, at least at some level, or that knowledge was ascertainable prior to and during Deborah’s exposure.

I find that the summary judgment record, considered in the light most favorable to the Daughetees, contains significant information and circumstances regarding the risk

If the plaintiff has failed to prove any of these propositions, the plaintiff is not entitled to damages. If the plaintiff has proved all of these propositions, the plaintiff is entitled to damages in some amount. [If an affirmative defense is submitted, delete the second sentence and insert the following: If the plaintiff has proved all of these propositions, then you will consider the defense of _____ as explained in Instruction No. _____.]

I find that this formulation of the elements of a warning defect claim is consistent with the formulation of the claim in Restatement (Third) of Torts: Products Liability § 2.

of diacetyl, and butter flavoring products containing diacetyl, all of which was either known by defendants or easily ascertainable. I briefly review some of that information and those circumstances.

As members of FEMA, Symrise and Firmenich had access to health hazard information published by FEMA in its FFIDS. In 1985, FEMA issued a FFIDS for diacetyl which stated that, upon inhalation, diacetyl was “harmful” and high concentrations were “capable of producing systemic toxicity.” FFIDS at 2; Plaintiffs’ App. at 76. Defendants used diacetyl in at least some of their butter flavorings.

In approximately 1991, Fred Stults prepared a Chemical Hygiene Plan (“CHP”) for Firmenich. The CHP contained a section called “Working with Chemicals of Potent Inhalation Hazard.” Diacetyl was among the chemicals listed in that section. The CHP required a “special label” for the listed chemicals which included a picture of a nose inhaling vapors and the warning: “Inhalation hazard do not inhale.” CHP at 10; Plaintiffs’ App. at 200. The CHP also cautions: “Use and store these substances only in a well-ventilated area or a hood or other containment device for procedures which may result in the generation of aerosols or vapors containing the substances. *Id.* Firmenich, however, did not include the “special label” on any of the labels of products that it sold to General Mills.

In 1992, Givaudan, another member of FEMA, discovered that one or more of its employees had been diagnosed with bronchiolitis obliterans and that one of the employees may have died as a result. On July 22, 1996, Givaudan informed FEMA that one or more Givaudan employees had been diagnosed with bronchiolitis obliterans. FEMA decided to hold the 1997 FEMA Seminar in response to Givaudan’s disclosure. The focus of the seminar was respiratory safety at member facilities. Employees and officers of Symrise and Firmenich attended the seminar. While no speaker at the 1997 FEMA Seminar stated that diacetyl exposure caused or was suspected of causing

bronchiolitis obliterans, attendees were clearly informed that there was a possible case of bronchiolitis obliterans at a FEMA member plant.

In August 2000, NIOSH performed a Health Hazard Evaluation of the Gilster-Mary Lee microwave popcorn plant in Jasper, Missouri. The NIOSH investigation included Gilster-Mary Lee's quality control room. In its interim report, NIOSH found elevated rates of chronic cough, shortness of breath, obstructive spirometry abnormalities, asthma, chronic bronchitis, breathing trouble, and fatigue among plant workers. NIOSH also found "[s]trong exposure-response relationships existed between quartile of estimated cumulative exposure to diacetyl and respiratory dust and frequency and degree of airway obstruction." Interim Report at 2; Plaintiffs' App. at 301. After conducting follow-up testing at Gilster-Mary Lee, NIOSH considered the quality control room to be "an additional high risk area" in which "5 of the 6 workers had airways obstruction." Interim Letter Report at 2; Plaintiffs' App. at 348. NIOSH noted that: "[Quality control] workers are repeatedly exposed for intervals of several seconds up to several minutes to elevated organic vapor concentrations by work processes throughout the shift." *Id.* The NIOSH reported two of the three sources for the vapors was "microwave oven fan exhaust during cooking of the corn" and "bursts of steam and flavoring vapors ejected as bags are opened." *Id.*

In 2001, the Wall Street Journal published an article about employees who worked with butter flavorings at the Gilster-Mary Lee plant developing lung disease. After that article was published, in 2001, a Firmenich employee was found to have had a decline in his pulmonary function test. The Firmenich employee was referred to Dr. Robert Kruklitis. On March 25, 2002, Dr. Kruklitis noted in a letter to another doctor that the worker had "obstructive airway disease/constrictive bronchiolitis." Letter at 3; Plaintiffs' App. at 153. Dr. Kruklitis also offered the following observation:

However, it is noteworthy that at least eight other individuals have developed an apparently similar condition while working in the Gilster/Marilee Corporation, a plant in which artificial butter flavorings are made. In fact, [the employee] states that artificial butter flavoring is also made at his plant, and he has participated on several occasions in the process. Given these facts and his lack of other obvious etiology, we are very suspicious that the constrictive bronchiolitis is secondary to exposure to one or more chemicals which [the employee] has been exposed.

Letter at 3; Plaintiffs' App. at 153.

On August 2, 2002, NIOSH issued a "Worker Update" concerning the testing at the Gilster-Mary Lee plant. The update states that "[w]e believe butter flavoring in the air caused lung disease in workers at this plant." Worker Update at 2; Plaintiffs' App. at 359. The NIOSH update made the following observation concerning quality control exposures:

Many quality control workers had abnormal breathing tests and have continued risk even after the ventilation changes in the plant. Based on our survey results, we believe that they may receive many peak exposures to flavoring vapors when microwaving the popcorn bags, opening them, and measuring the amount of hot popcorn. When the popcorn/flavorings temperature increased, the vapor increased, although the high exposures only lasted for seconds or a few minutes. We are concerned about these short peak exposures in the quality control room and have provided recommendations for control.

Worker Update at 3; Plaintiffs' App. at 360.

By 2003, NIOSH started to conduct investigations at several of ConAgra's microwave popcorn plants. In March 2003, NIOSH conducted a medical survey of ConAgra's workers. NIOSH's survey identified workers with evidence of lung disease of the same type seen in workers who mixed oil and flavorings in other microwave

popcorn plants. By the end of 2003, a number of ConAgra workers had filed lawsuits alleging that they suffered lung disease as a result of exposure to butter flavorings.

The plain language of § 2(c) focuses on the concept of “reasonableness” for judging the adequacy of warnings, a malleable concept that is intertwined with the facts and circumstances of each case. “Whether the warning actually given was reasonable in the circumstances is to be decided by the trier of fact.” RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. i. Section 2’s comment i also provides a non-exhaustive list of factors to guide in determining whether a warning was adequate in any given situation:

No easy guideline exists for courts to adopt in assessing the adequacy of product warnings and instructions. In making their assessments, courts must focus on various factors, such as content and comprehensibility, intensity of expression, and the characteristics of expected user groups.

Id.

I find that the information and circumstances detailed above, considered in the light most favorable to the Daughetees, generates genuine issues of material fact as to whether defendants knew or had reason to know that their butter flavorings posed a potential risk, at some level, to consumers, thus triggering the necessity for a warning. Therefore, this portion of defendants’ motion for summary judgment on the failure-to-warn claims is denied.

b. Intermediary user defense

Defendants also move for summary judgment on the Daughetees’ failure to warn claims because General Mills and ConAgra were “sophisticated” intermediary users of their butter flavoring products and, thus, defendants were entitled to rely on General Mills and ConAgra to provide appropriate warnings to consumers. The Daughetees argue that defendants cannot avail themselves of the intermediary user defense because

they failed to fully communicate the possible hazards of their butter flavorings to General Mills and ConAgra and therefore could not reasonably rely on General Mills and ConAgra to provide appropriate warnings.

In *Nationwide Agribusiness Ins. Co. v. SMA Elevator Constr., Inc.*, 816 F. Supp.2d 631 (N.D. Iowa 2011), I specifically found that:

the “intermediary” defense is still viable under Iowa law. Specifically, I find that Restatement (Third) § 2(c) and comment i recognize a defense to a warning defect claim based on the duty of an intermediary—and not even necessarily a “learned” or “sophisticated” intermediary—to warn the end user. Section 2 expressly considers whether “the foreseeable risks of harm posed by the product could have been reduced or avoided by the provision of reasonable instructions or warnings by the seller or other distributor, *or a predecessor in the commercial chain of distribution.*”

Nationwide Agribusiness Ins. Co., 816 F. Supp.2d at 653-54 (quoting RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2(c) (emphasis added)). Comment i provides the following guidance for determining when a warning to an intermediary is sufficient:

Depending on the circumstances, Subsection (c) may require that instructions and warnings be given not only to purchasers, users, and consumers, but also to others who a reasonable seller should know will be in a position to reduce or avoid the risk of harm. *There is no general rule as to whether one supplying a product for the use of others through an intermediary has a duty to warn the ultimate product user directly or may rely on the intermediary to relay warnings. The standard is one of reasonableness in the circumstances.* Among the factors to be considered are the gravity of the risks posed by the product, the likelihood that the intermediary will convey the information to the ultimate user, and the feasibility and effectiveness of giving a warning directly to the user. Thus, when the purchaser of machinery is the owner of a workplace who provides the

machinery to employees for their use, and there is reason to doubt that the employer will pass warnings on to employees, the seller is required to reach the employees directly with necessary instructions and warnings if doing so is reasonably feasible.

RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2(c), Comment i (emphasis added)).⁶ Comment i distills down to three non-exclusive factors the considerations set out at length in Comment n for determining when a warning to an intermediary is sufficient.

⁶ The Restatement, Second, of Torts § 388, Comment n provides the following guidance in deciding whether a warning should be given directly to third persons:

[I]t is obviously impossible to state in advance any set of rules which will automatically determine in all cases whether one supplying a chattel for the use of others through a third person has satisfied his duty to those who are to use the chattel by informing the third person of the dangerous character of the chattel, or of the precautions which must be exercised in using it in order to make its use safe. There are, however, certain factors which are important in determining this question. There is necessarily some chance that information given to the third person will not be communicated by him to those who are to use the chattel. This chance varies with the circumstances existing at the time the chattel is turned over to the third person, or permission is given to him to allow others to use it. These circumstances include the known or knowable character of the third person and may also include the purpose for which the chattel is given. Modern life would be intolerable unless one were permitted to rely to a certain extent on others' doing what they normally do, particularly if it is their duty to do so.

RESTATEMENT (SECOND) OF TORTS § 388 cmt. n (1999). Comment n has been relied on by the Iowa Supreme Court. See *Cooley v. Quick Supply Co.*, 221 N.W.2d 763, 769 (Iowa 1974).

I conclude, taking the facts in the light most favorable to the Daughetees, the non-moving party, *see Torgerson*, 643 F.3d at 1042–43, that a reasonable juror could reject application of defendants’ “intermediary” defense. Significantly, a reasonable juror could conclude that defendants’ butter flavorings containing diacetyl were dangerous products if inhaled. Moreover, a reasonable juror could conclude that the likelihood that the intermediaries, General Mills and ConAgra, would convey the information to the ultimate user was greatly reduced or eliminated if defendants withheld information concerning the dangers posed by their butter flavorings from General Mills and ConAgra. General Mills and ConAgra could not be relied on as reasonable conduits for the necessary information concerning defendants’ butter flavorings if defendants were not first forthcoming to them about the respiratory dangers posed by their products. Finally, a reasonable juror could conclude that placing an adequate warning on microwave popcorn products containing defendants’ butter flavorings would not be burdensome. There is no material in the summary judgment record that either General Mills or ConAgra were likely to refuse placement of a warning on their microwave popcorn product.

Therefore, this portion of defendants’ motion for summary judgment on the failure-to-warn claims is also denied.

c. Bulk-supplier defense

Finally, defendants move for summary judgment on the Daughetees’ failure to warn claims on the ground that they were bulk suppliers of butter flavorings to General Mills and ConAgra. The so-called “bulk-supplier” exception recognizes the difficulties inherent in warning ultimate consumers of possible dangers when a manufacturer supplies a product in bulk with no package of its own on which to place warnings. See *Alm v. Aluminum Co. of Am.*, 717 S.W.2d 588, 592 (Tex. 1986). Because defendants all supplied their butter flavorings in packages, the bulk-supplier exception has no

application here. Therefore, defendants' Joint Motion For Summary Judgment On Plaintiffs' Failure To Warn Claims (No Duty To Warn) is denied.

2. *Proximate cause*

Defendants also seek summary judgment on the Daughetees' failure to warn claims on the grounds that the Daughetees cannot establish that defendants' failure to warn Deborah was the proximate cause of her lung condition. Defendants argue that the Daughetees cannot establish the required causation evidence through expert testimony. Defendants further assert that, even if the Daughetees could muster the required expert causation evidence, the Daughetees' failure to warn claims fail as a matter of law because there is no evidence that any alleged failure to warn was the proximate cause of Deborah's injuries. Finally, defendants contend any claim based on a failure to warn that occurred after Deborah's February 2000 diagnosis fails because any warning after that date would have no causal relationship to her diagnosis. I will take up each of defendants' arguments, in turn, after briefly reviewing the proximate cause requirement.

a. *Proximate cause requirement*

Under Iowa law, the burden of proving proximate cause is on the plaintiff. See *Thompson*, 774 N.W.2d at 836; *City of Cedar Falls*, 617 N.W.2d at 17; *Banks v. Harley-Davidson, Inc.*, 73 F.3d 213, 215 (8th Cir. 1996). Causation has two components: 1) “the defendant's conduct must have in fact caused the plaintiff's damages (generally a factual inquiry)” and 2) “the policy of the law must require the defendant to be legally responsible for the injury (generally a legal question).” *Scoggins v. Wal-Mart Stores, Inc.*, 560 N.W.2d 564, 567 (Iowa 1997) (quoting *Gerst v. Marshall*, 549 N.W.2d 810, 815 (Iowa 1996)). In conducting the factual inquiry, a court must look to two components: 1) “whether the harm would not have occurred but for the negligence of the defendant, and 2) whether the negligence of the defendant was

a substantial factor in bringing about the harm.” *Id.* In conducting the legal inquiry, the court must determine if “‘the policy of the law will extend responsibility to those consequences which have in fact been produced by an actor's conduct.’” *Id.* (quoting *Kelly v. Sinclair Oil Corp.*, 476 N.W.2d 341, 349 (Iowa 1991)). “In products liability, the plaintiff must prove his or her injuries were proximately caused by an item manufactured or supplied by the defendant.” *Spaur v. Owens–Corning Fiberglas Corp.*, 510 N.W.2d 854, 858 (Iowa 1994); see *Lovick v. Wil–Rich*, 588 N.W.2d 688, 700 (Iowa 1999). It is well-settled that questions of “‘proximate cause are ordinarily for the jury,” and “only in exceptional cases should they be decided as a matter of law.” *Thompson v. Kaczinski*, 774 N.W.2d 829, 832 (Iowa 2009) (quoting *Clinkscapes v. Nelson Sec., Inc.*, 697 N.W.2d 836, 841 (Iowa 2005)); see IOWA R. APP. P. 6.904(3)(j) (among legal propositions that are deemed so well established under Iowa law that authorities need not be cited in support: “Generally questions of negligence, contributory negligence, and proximate cause are for the jury; it is only in exceptional cases that they may be decided as matters of law.”).

b. Expert evidence of causation

Defendants initially argue that the Daughetees cannot establish that Deborah’s lung disease was caused by her exposure to microwave popcorn containing diacetyl because they cannot present expert testimony to support their claims. Defendants’ argument is premised on their prevailing on their motion to exclude the general and specific causation opinions of the Daughetees’ expert witnesses, Drs. David Egilman, Charles Pue, and Allan Parmet. However, I denied defendants’ motion to exclude the causation opinions of the Daughetees’ expert witnesses. Therefore, because the Daughetees have expert causation opinion evidence to present at trial, this portion of defendants’ motion for summary judgment is denied.

c. Evidence establishing proximate cause for failure to warn

Defendants also argue that the Daughetees cannot establish proximate cause for their failure to warn claim because they cannot establish that, but for defendants' failure to warn General Mills and ConAgra about the potential health risks associated with defendants' butter flavorings containing diacetyl, General Mills and ConAgra would have warned microwave popcorn consumers, thereby causing Deborah to alter her conduct so as to avoid injury. The Daughetees respond that defendants' argument is merely a restatement of their intermediary user defense repackaged as a causation argument.

As previously noted, it is a well-settled maxim under Iowa law that questions of “proximate cause are ordinarily for the jury,” and “only in exceptional cases should they be decided as a matter of law.” *Thompson*, 774 N.W.2d at 832 (quoting *Clinkscales*, 697 N.W.2d at 841); see *Felderman*, 731 N.W.2d at 679; *City of Cedar Falls*, 617 N.W.2d at 16; *McCaull v. Universal Mfg. Co.*, 218 N.W.2d 592, 593 (Iowa 1974); *Regan v. Denbar, Inc.*, 514 N.W.2d 751, 752 (Iowa Ct. App. 1994). This is not an “exceptional” case. “In the context of a failure to warn claim, proximate cause can be established by showing a warning would have altered the plaintiff's conduct so as to avoid injury.” *Lovick*, 588 N.W.2d at 700. There is no material in the summary judgment record that Deborah would have ignored a warning to avoid breathing in the vapors from a freshly popped bag of microwave popcorn. A reasonable juror could conclude that a person would not risk permanent, severe lung damage in order to enjoy breathing in the buttery smelling vapors from microwave popcorn if warned about possible serious consequences. There is also no material in the summary judgment record that either General Mills or ConAgra were likely to refuse placement of a reasonable warning on their microwave popcorn product. Moreover, as previously explained, a reasonable juror could conclude that the likelihood that General Mills and

ConAgra would convey a warning about the dangers of diacetyl to their microwave popcorn users was greatly reduced or eliminated if defendants withheld information concerning the dangers posed by their butter flavorings from General Mills and ConAgra. Whether defendants withheld information concerning the dangers posed by their butter flavorings is hotly contested by the parties. Given these circumstances, I conclude that questions of proximate cause, here, are for the jury to determine and deny this portion of defendants' motion for summary judgment.

d. Post-February 2000 warnings

Defendants further argue that they are entitled to summary judgment on the Daughetees' failure to warn claims that post-date her first lung biopsy in February 2000. Defendants contend that any warning they could have provided to Deborah after she was diagnosed with her lung condition would not have prevented her from developing her lung condition. In response, the Daughetees contend that defendants' argument fails to take into consideration that a warning after that date could have aided in Deborah obtaining a correct diagnosis for her lung condition and would have reduced the severity of her lung condition by eliminating her further exposure to butter flavored microwave popcorn containing diacetyl.⁷ The Daughetees point to the testimony of Dr. Egilman, an expert witness, that Deborah's lung condition was aggravated by her continued exposure to butter flavored microwave popcorn containing diacetyl. I find that summary judgment is inappropriate because a reasonable juror could conclude that defendants' failure to warn Deborah, after February 2000, of the dangers of breathing butter flavoring containing diacetyl proximately caused the aggravation of her lung

⁷ The Daughetees further assert that evidence of defendants' conduct regarding warnings is relevant on the issue of punitive damages, and may be considered by the jury in determining whether defendants' conduct in failing to provide warnings constituted willful and wanton disregard for the safety of another. *See Lovick*, 588 N.W.2d at 699.

condition. *See Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 266 (4th Cir. 1999) (affirming jury verdict on plaintiff's claim that defendant's failure to warn him of the dangers of breathing airborne talc proximately caused the aggravation of his pre-existing sinus condition).

Therefore, defendants' Joint Motion For Summary Judgment On Plaintiffs' Failure To Warn Claims (No Evidence Of Proximate Cause) is denied.

C. Breach Of Implied Warranty Claims

Defendants also seek summary judgment on the Daughetees' breach of implied warranty claims. Defendants make three arguments. First, defendants contend that the breach of implied warranty claims are redundant with the Daughetees' negligent claims. Second, defendants argue that the Daughetees have offered no proof of a product defect, and, therefore, they cannot sustain a breach of implied warranty claim. Finally, defendants seek summary judgment on any claim based on a breach that occurred after February 2000 because any breach after that date would have no causal relationship to her alleged diagnosis. I take up each of these arguments seriatim.

1. Are implied warranty claims redundant?

Defendants argue that the Daughetees' breach of implied warranty claims in Count II are redundant with their negligence claims found in Count I. Defendants argue that to submit both claims to the jury will generate confusion and may well lead to inconsistent verdicts. The Daughetees respond that, under Iowa law, both claims may be asserted in the same case.

The Iowa Supreme Court has "observed that a warranty of merchantability 'is based on a purchaser's reasonable expectation that goods . . . will be free of significant defects and will perform in the way goods of that kind should perform.'" *Wright*, 652 N.W.2d at 180-81 (quoting *Van Wyk v. Norden Labs., Inc.*, 345 N.W.2d 81, 84 (Iowa

1984), with emphasis added in *Wright*). As opposed to the implied warranty for a particular purpose, “the implied warranty of merchantability involves the fitness of goods for their ordinary purpose.” *Renze Hybrids, Inc. v. Shell Oil Co.*, 418 N.W.2d 634, 638 (Iowa 1988); *Van Wyk*, 345 N.W.2d at 87 (in contrast to a claim of breach of warranty for a particular purpose, a claim of breach of “the warranty of merchantability does not require evidence of a particular purpose or of the seller's knowledge of a particular purpose of the buyer, or that the seller had reason to know the buyer was relying on the seller's skill and judgment, or that the buyer in fact relied upon the seller's skill and judgment”). As the Iowa Supreme Court most recently explained, in *Scott v. Dutton-Lainson Co.*, 774 N.W.2d 501 (Iowa 2009),

Wright held . . . that a claim for breach of implied warranty under Iowa Code section 554.2314(2)(c) “requires proof of a product defect as defined in Products Restatement section 2.” *Wright*, 652 N.W.2d at 181–82. Therefore, a breach of warranty claim will require proof of the standard for either a manufacturing defect, a design defect, or a failure to warn.

Scott, 774 N.W.2d at 505 n.2.

Iowa law also recognizes both statutory and common-law implied warranties of fitness for a particular purpose. See *Chicago Cent. & Pac. R.R. Co. v. Union Pac. R.R. Co.*, 558 N.W.2d 711, 715 (Iowa 1997); IOWA CODE § 554.2315. Recovery under the statutory theory requires proof of the following elements: (1) the seller had reason to know of the buyer's particular purpose; (2) the seller had reason to know the buyer was relying on the seller's skill or judgment to furnish suitable goods; and (3) the buyer in fact relied on the seller's skill or judgment to furnish suitable goods. *Renze Hybrids, Inc.*, 418 N.W.2d at 637; *Van Wyk*, 345 N.W.2d at 84. As to the first element, although the predecessor to § 554.2315 required the buyer to make the particular purpose known to the seller, expressly or by implication, the present version does not; rather, the buyer must show that the seller “had reason to know” of any

particular purpose the buyer intended. *Renze*, 418 N.W.2d at 637; *see also Bergquist v. Mackay Engines, Inc.*, 538 N.W.2d 655, 658 (Iowa Ct. App.1995) (stating, “While a purchaser need not show he advised the seller of the particular purpose in purchasing the goods, he must nevertheless show that the seller had reason to know of that purpose,” and citing *Farm Bureau Mutual Insurance Co. v. Sandbulte*, 302 N.W.2d 104, 111 (Iowa 1981)).

In support of their argument that submitting both the Daughetees’ negligence claims and breach of implied warranty claims is redundant and likely to confuse the jury and may lead to inconsistent verdicts, defendants point to comment n. to Restatement (Third) of Torts: Products Liability § 2. That comment states, in pertinent part, that:

A separate and more difficult question arises as to whether a case should be submitted to a jury on multiple theories of recovery. Design and failure-to-warn claims may be combined in the same case because they rest on different factual allegations and distinct legal concepts. However, two or more factually identical defective-design claims or two or more factually identical failure-to-warn claims should not be submitted to the trier of fact in the same case under different doctrinal labels. Regardless of the doctrinal label attached to a particular claim, design and warning claims rest on a risk-utility assessment. To allow two or more factually identical risk-utility claims to go to a jury under different labels, whether “strict liability,” “negligence,” or “implied warranty of merchantability,” would generate confusion and may well result in inconsistent verdicts.

RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2. The Iowa Supreme Court, however, has clearly stated that “personal injury plaintiffs are permitted to seek recovery under tort and warranty theories that in essence allege the same wrongful acts.” *Wright*, 652 N.W.2d at 181; *see Mercer*, 616 N.W.2d at 621 (holding no error in submitting personal injury claims under both strict liability and breach of warranty

theories); *see also Lovick*, 588 N.W.2d at 698 (stating that although claims for negligence, strict liability, and breach of warranty are separate and distinct theories of liability under products liability law, the same facts often give rise to those three claims). Thus, the Daughetees' negligence claims and implied warranty claims are not redundant. I also note that the risks of jury confusion can be alleviated by instructions to the jury during trial and the manner in which the Daughetees' claims are submitted to the jury for deliberation. Accordingly, I deny this portion of defendants' motion for summary judgment.

2. *Proof of a product defect*

Defendants also argue that the Daughetees have offered no proof of a product defect, and, therefore, their breach of implied warranty claims fail as a matter of law. The Daughetees respond that they have adduced sufficient evidence to prevail on a breach of implied warranty claim based on either a failure to warn or a design defect.

a. *Defective because of inadequate warnings*

Defendants assert that the Daughetees' implied warranty claims based on inadequate warnings fail because they had no duty to warn Deborah about the dangers associated with their butter flavorings. The Daughetees dispute defendants' assertion. Both parties reassert all of their arguments addressed above concerning the Daughetees' failure to warn claims. For the reasons stated at length above, I conclude genuine issues of material fact have been generated on whether defendants knew or had reason to know that their butter flavorings posed a potential risk, at some level, to consumers, thus triggering the necessity for a warning. Therefore, this portion of defendants' motion for summary judgment is denied.

b. *Defective design*

The Iowa Supreme Court has explained that, "[t]o succeed under [Restatement (Third)] section 2(b), a plaintiff must ordinarily show the existence of a reasonable

alternative design, *Wright*, 652 N.W.2d at 169, and that this design would, at a reasonable cost, have reduced the foreseeability of harm posed by the product[,] Restatement § 2 cmt. d.” *Parish*, 719 N.W.2d at 543; *accord Scott*, 774 N.W.2d at 506 *658 (“The Third Products Restatement section 2, as adopted in *Wright*, requires plaintiffs in design defect cases to demonstrate the existence of a reasonable alternative design.”). Defendants assert that the Daughetees’ implied warranty claims based on defective designs fail because they have offered no evidence of a reasonable alternative design. The Daughetees contend that defendants’ assertion is untrue and that they have put forward evidence that diacetyl-free butter flavorings was a viable alternative design. A review of those materials belies that claim.⁸ None of the materials cited by the Daughetees supports the proposition that defendants have or could have produced diacetyl-free butter flavorings. Thus, I find that the materials submitted by the Daughetees are insufficient for a jury to conclude that a reasonable alternative design was available to butter flavorings with diacetyl. Accordingly, this portion of defendants’ motion for summary judgment is granted.

3. Post-February 2000 implied warranty claims

Defendants also argue that they are entitled to summary judgment on the Daughetees’ implied warranty claims that post-date her first lung biopsy in February 2000. Defendants contend that any breach of an implied warranty after Deborah was diagnosed with her lung condition could not have caused her lung condition. In response, the Daughetees reiterate their arguments concerning summary judgment on their failure to warn claims that post-date her first lung biopsy in February 2000. For the reasons stated above, at minimum, I find that summary judgment is inappropriate

⁸ I have not considered David Bratton’s affidavit statement, Kay Young’s deposition testimony, or Klaus Bauer’s deposition testimony on this issue. Although snippets of these materials were set out in the Daughetees’ brief, none of the cited statements were included in the Daughetees’ appendix.

because a reasonable juror could conclude that defendants' failure to warn Deborah, after February 2000, of the dangers of breathing butter flavorings containing diacetyl proximately caused the aggravation of her lung condition.

Therefore, defendants' Joint Motion For Summary Judgment On Breach Of Implied Warranty Claim is granted in part and denied in part. It is granted only as to the Daughetees' breach of implied warranty claim based on a design defect.

D. Symrise Butter Flavor in ConAgra Microwave Popcorn

Defendant Symrise also seeks summary judgment on the Daughetees' claims as they relate to Dragoco butter flavorings contained in ConAgra ACT II Butter Lover's microwave popcorn. Symrise asserts that the Daughetees cannot prove that her lung disease was caused by Dragoco butter flavorings contained in ConAgra ACT II Butter Lover's microwave popcorn. Symrise argues that Dragoco only provided butter flavorings containing diacetyl to ConAgra for a short time in the early 1990's and that the amount of Dragoco's butter flavorings used in ConAgra's ACT II Butter Lover's microwave popcorn is unknown. As a result, Symrise argues that Deborah's exposure levels to it are speculative and cannot support a finding of causation. Symrise further argues that any claim based on Deborah's exposure to Dragoco butter flavorings contained in ConAgra ACT II Butter Lover's microwave popcorn is barred under Iowa's statute of repose, Iowa Code § 614.1. The Daughetees respond that Dragoco's butter flavorings are not the only butter flavorings containing diacetyl that Symrise supplied and that Deborah's cumulative exposure to Symrise's products is sufficient to generate a genuine issue of material fact with respect to causation. The Daughetees also argue that Iowa's statute of repose does not bar their claims because of Iowa's

discovery rule. As I have done before, I will take up each of these claims, in turn, if necessary, beginning with Symrise's statute of repose argument.

Symrise's statute of repose argument requires me to explain Iowa's statute of repose, Iowa Code § 614.1, and its discovery rule exception found in Iowa Code § 614.1(2A)(b). *See Great Plains Trust Co. v. Union Pac. R.R. Co.*, 492 F.3d 986, 992 (8th Cir. 2007) ("A federal court sitting in diversity jurisdiction applies the statute-of-limitations of the forum.") (citing *Nettles v. American Tel. & Tel. Co.*, 55 F.3d 1358, 1362 (8th Cir.1995)). Iowa's statute of repose contains the following relevant provisions:

Actions may be brought within the times herein limited, respectively, after their causes accrue, and not afterwards, except when otherwise specially declared:

. . . .

2A. *With respect to products.*

a. Those founded on the death of a person or injuries to the person or property brought against the manufacturer, assembler, designer, supplier of specifications, seller, lessor, or distributor of a product based upon an alleged defect in the design, inspection, testing, manufacturing, formulation, marketing, packaging, warning, labeling of the product, or any other alleged defect or failure of whatever nature or kind, based on the theories of strict liability in tort, negligence, or breach of an implied warranty shall not be commenced more than fifteen years after the product was first purchased, leased, bailed, or installed for use or consumption unless expressly warranted for a longer period of time by the manufacturer, assembler, designer, supplier of specifications, seller, lessor, or distributor of the product. This subsection shall not affect the time during which a person found liable may seek and obtain contribution or indemnity from another person whose actual fault caused a product to be defective. This subsection shall not apply if

the manufacturer, assembler, designer, supplier of specifications, seller, lessor, or distributor of the product intentionally misrepresents facts about the product or fraudulently conceals information about the product and that conduct was a substantial cause of the claimant's harm.

b. (1) The fifteen-year limitation in paragraph “a” shall not apply to the time period in which to discover a disease that is latent and caused by exposure to a harmful material, in which event the cause of action shall be deemed to have accrued when the disease and such disease's cause have been made known to the person or at the point the person should have been aware of the disease and such disease's cause. This subsection shall not apply to cases governed by subsection 11 of this section.

(2) As used in this paragraph, “harmful material” means silicone gel breast implants, which were implanted prior to July 12, 1992; and chemical substances commonly known as asbestos, dioxins, tobacco, or polychlorinated biphenyls, whether alone or as part of any product; or any substance which is determined to present an unreasonable risk of injury to health or the environment by the United States environmental protection agency pursuant to the federal Toxic Substance Control Act, 15 U.S.C. § 2601 et seq., or by this state, if that risk is regulated by the United States environmental protection agency or this state.

IOWA CODE § 614.1(2A).

A statute of repose runs from the time the product is first purchased and not from the time harm is first suffered. In other words, “a statute of limitations runs from the accrual of a cause of action, whereas a statute of repose runs from a different, earlier date.” *Albrecht v. General Motors Corp.*, 648 N.W.2d 87, 90 (Iowa 2002). Thus, Iowa Code § 614.1(2A) is “clearly [a] statute[] of repose.” *Id.* at 92.

The Daughetees do not dispute that their claims fall within the ambit of this statute of repose. Rather, they argue that their claims are allowed by an exception

provided for in the statute. Specifically, the exception in § 614.1(2A)(b)(1) for the discovery of latent disease caused by exposure to a “harmful material.” However, the term harmful material is specifically defined as: (1) “silicone gel breast implants, which were implanted prior to July 12, 1992;” (2) “chemical substances commonly known as asbestos, dioxins, tobacco, or polychlorinated biphenyls, whether alone or as part of any product;” or (3) “any substance which is determined to present an unreasonable risk of injury to health or the environment by the United States environmental protection agency pursuant to the federal Toxic Substance Control Act, 15 U.S.C. § 2601 et seq., or by this state, if that risk is regulated by the United States environmental protection agency or this state.” IOWA CODE § 614.1(2A)(b)(2).

The harmful material at issue here is diacetyl. In order for diacetyl to fall within the third category of harmful materials, it must have been determined by either the United States EPA, pursuant to the federal Toxic Substance Control Act, 15 U.S.C. § 2601, or Iowa, to “present an unreasonable risk of injury to health or the environment” and that risk must be regulated by the United States EPA or Iowa. Diacetyl is not classified as harmful material by either the United States EPA or Iowa. To the contrary, it is listed as a food ingredient that is generally recognized as safe for human consumption. *See* 21 C.F.R. § 184.1278. Accordingly, no statutory exception applies and the Daughetees’ claims are subject to Iowa’s fifteen year statute of repose. Deborah first consumed or purchased ConAgra ACT II Butter Lover’s microwave popcorn containing Dragoco butter flavorings with diacetyl in 1992. The Daughetees’ filed their initial complaint on December 8, 2009, more than fifteen years after Deborah first purchased ConAgra ACT II Butter Lover’s microwave popcorn containing Dragoco butter flavorings with diacetyl. Thus, the Daughetees’ claims as to ConAgra ACT II Butter Lover’s microwave popcorn containing Dragoco butter flavorings with diacetyl are barred under Iowa’s statute of repose. Therefore,

Symrise's Motion For Summary Judgment As To Plaintiff's Alleged Exposure To Symrise Butter Flavor In ConAgra Microwave Popcorn is granted.

E. Punitive Damages

The last motion at issue is Symrise's Motion For Summary Judgment Upon Plaintiffs' Punitive Damage Claim. Symrise contends the Daughetees' claims for punitive damages fail as a matter of law because no evidence exists that Symrise willfully and wantonly disregarded Deborah's safety. The Daughetees' counter that I should refrain from determining whether punitive damages should be submitted to the jury until the evidence is presented at trial. The Daughetees further argue that materials in the summary judgment record would support a reasonable juror in concluding that punitive damages were warranted because Symrise exhibited a pattern of indifference in failing to adequately warn of the hazards despite ongoing knowledge of workers getting sick from exposure to their butter flavorings containing diacetyl.

1. Standard for punitive damages under Iowa law

Under Iowa law, punitive damages are merely incidental to the main cause of action and they are derived from the underlying cause of action. *Campbell v. Van Roekel*, 347 N.W.2d 406, 410 (Iowa 1984). Thus, punitive damages can only be awarded when the plaintiff prevails on an underlying cause of action, then proves the requirements for punitive damages under Iowa law. *See Holt v. Quality Egg, L.L.C.*, 777 F. Supp. 2d 1160, 1172 (N.D. Iowa 2011) (also concluding that the plaintiff is not required to prove that "willful and wanton conduct" was an element of the underlying claim before punitive damages may be awarded). As the Iowa Supreme Court explained, in a products liability case,

Iowa Code section 668A.1(1)(a) sets the standard for an award of punitive damages. Under this section, an award of punitive damages will stand when there is

proof of conduct that establishes a “willful and wanton disregard for the rights or safety of another.” *Wilson v. IBP, Inc.*, 558 N.W.2d 132, 142 (Iowa 1996) (citing Iowa Code § 668A.1(1)(a)). We have approved the following definition of “willful and wanton” conduct for section 668A.1(1) purposes:

[T]he actor has intentionally done an act of an unreasonable character in disregard of a known or obvious risk that was so great as to make it highly probable that harm would follow, and which thus is usually accompanied by a conscious indifference to the consequences.

Fell [v. Kewanee Farm Equip. Co.], 457 N.W.2d [911,] 919 [(Iowa 1990)] (quoting W. Page Keeton, et al., *Prosser & Keeton on the Law of Torts* § 34, at 213 (5th ed.1984)). The evidence to support an award must be clear, convincing and satisfactory. Iowa Code § 668A.1(1)(a).

We have noted that punitive damages serve ““as a form of punishment and to deter others from conduct which is sufficiently egregious to call for the remedy.”” *McClure [v. Walgree Co.]*, 613 N.W.2d [225,] 230 [(Iowa 2000)] (quoting *Coster v. Crookham*, 468 N.W.2d 802, 810 (Iowa 1991)). Consequently, punitive damages are appropriate only when actual or legal malice is shown. *Schultz v. Security Nat’l Bank*, 583 N.W.2d 886, 888 (Iowa 1998). Mere negligent conduct is therefore not sufficient to support a claim for punitive damages. *Beeman v. Manville Corp. Asbestos Disease Compensation Fund*, 496 N.W.2d 247, 256 (Iowa 1993).

Mercer v. Pittway Corp., 616 N.W.2d 602, 617 (Iowa 2000). I have concluded that “punitive damages must be based on evidence that relates to the underlying cause of action,” because IOWA CODE § 668A.1 requires that punitive damages be based on

sufficient proof that “the conduct of the defendant from which the claim arose constituted willful and wanton disregard for the rights or safety of another.” *Holt*, 777 F. Supp. 2d at 1173 (quoting IOWA CODE § 668A.1).

As to the “malice” requirement, the Iowa Supreme Court has also explained,

Actual malice is characterized by such factors as personal spite, hatred, or ill will. [*Schultz*, 583 N.W.2d at 888.] Legal malice is shown by wrongful conduct committed or continued with a willful or reckless disregard for another’s rights. *Id.*

McClure, 613 N.W.2d at 231. The Daughetees have not asserted that there is any evidence showing that Symrise acted with “actual malice,” so their punitive damages claim must be based on an assertion that Symrise acted with “legal malice” in selling its butter flavoring products with inadequate warnings. *See Mercer*, 616 N.W.2d at 617 (explaining that, under Iowa law, “punitive damages are appropriate only when actual or legal malice is shown”); *McClure*, 613 N.W.2d at 231 (defining “actual malice” and “legal malice”).

I note that, in *Mercer*, the Iowa Supreme Court rejected a punitive damages claim, because the evidence showed only a reasonable disagreement over the risks and utility of the product as designed, even where the manufacturer was aware of complaints or problems with the product, and allegedly failed to test the product adequately in “real world” circumstances. *See Mercer*, 616 N.W.2d at 618. I have observed that evidence of “disregard of a known or obvious risk that was so great as to make it highly probable that harm would follow” would support punitive damages, *Holt*, 777 F. Supp. 2d at 1173 (quoting *Mercer*, 616 N.W.2d at 617), and that such evidence “includes ‘evidence of [a] defendant’s persistent course of conduct to show that the defendant acted with no care and with disregard of the consequences of those act.’” *Id.* (quoting *Wolf v. Wolf*, 690 N.W.2d 887, 893 (Iowa 2005), in turn quoting

Hockenberg Equip. Co. v. Hockenberg's Equip. & Supply Co., 510 N.W.2d at 153, 156 (Iowa 1993)). More specifically still, I concluded that evidence that the defendant had notice of problems and ignored that notice may support a conclusion that the defendant took a persistent course with no care and with disregard of the consequences. *Id.* at 1173-74 (citing cases). I have required, however, that the notice of problems be sufficiently close in time and circumstances to be informative of the willfulness and wantonness of the conduct from which the claim arose. *Id.* at 1174.

2. *Analysis of the standards*

Although I might not award punitive damages on the present record, that is not the question on a motion for summary judgment. From the evidence in the record cited by the Daughetees, viewed in the light most favorable to the Daughetees, a rational trier of fact could find that Symrise knew or should have known the risk to consumers of its butter flavorings with diacetyl given the severe health effects suffered by workers exposed to butter flavoring ingredients. A reasonable juror could further conclude that given the magnitude of the harm and the lack of information about the minimum exposure level capable of causing harm, Symrise acted recklessly in failing to warn consumers of the potential for harm. Accordingly, whether Symrise's conduct amounts to willful and wanton conduct is a genuine issue of material fact and cannot be decided as a matter of law. Therefore, Symrise's Motion For Summary Judgment On Punitive Damages is denied.

III. *CONCLUSION*

Accordingly, for the reasons discussed above, it is ordered:

1. Symrise and Firmenich's Joint Motion For Summary Judgment On Plaintiffs' Failure To Warn Claims (No Duty To Warn) is **denied**.

2. Symrise and Firmenich's Joint Motion For Summary Judgment On Plaintiffs' Failure To Warn Claims (No Proximate Cause) is **denied**.

3. Symrise and Firmenich's Joint Motion For Summary Judgment On Breach Of Implied Warranty Claim is **granted in part and denied in part**, as follows:

a. The motion is **denied** as to the inadequate warnings defect claims, but

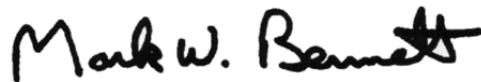
b. The motion is **granted** as to the "design defect" claims.

4. Symrise's Motion For Summary Judgment As To Plaintiff's Alleged Exposure To Symrise Butter Flavor In ConAgra Microwave Popcorn is **granted**.

5. Symrise's Motion For Summary Judgment On Punitive Damages is **denied**.

IT IS SO ORDERED.

DATED this 6th day of March, 2013.



MARK W. BENNETT
U.S. DISTRICT COURT JUDGE
NORTHERN DISTRICT OF IOWA