Toxic Love: Soy Baby Formula, Healthy Alternative or Unnecessary Harm?

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Attestation of authorship

"I hereby declare that this submission is my own work and that, to best of my knowledge and belief, contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted to the award of any other degree or diploma of university or other institution of higher learning."

Eva Evguenieva

Signed:……

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Abstract

A growing amount of scientific evidence from around the world suggests that babies fed soy-based infant formula are being put at risk of developing a number of irreversible health complications with potentially devastating effects on their long-term health. New Zealand scientists have calculated that a baby exclusively fed with soy formula could be receiving the equivalent of a number of birth control pills of plant-based oestrogens on a daily basis. Alarmed international scientists have tried to get the message across but say the authorities have ignored them. In New Zealand, scientists have raised the question, has the Government done enough to protect our babies? Studies conducted by renowned scientific authorities such as the Food and Drug Administration in America and many others internationally, confirm the possible toxicity of the phytoestrogens found in soy formula. Babies have been identified as the most at-risk group of the population for soy phytoestrogen toxicity because they are at key developmental stage. Scientists interviewed said there is a common misconception that soy infant formula in its current form has been used in Asia for centuries and therefore can be considered safe, which could not be further from the truth. Some international authorities have applied the Precautionary Principle and have acted to protect their most vulnerable, while others appear to ignore the increasing evidence. Through interviews and scientific data this thesis provides essential information about the soy phytoestrogen toxicity debate and demands answers to the question of why governments have not done more to educate parents about potential health risks. Interviewees say that the power and influence of the billion-dollar soy industry could be to blame.

Exegesis

"Anyone who has ever tried to present a rather abstract scientific subject in a popular manner knows the difficulty in such an attempt" (Albert Einstein).

International research indicates that as a result of phytoestrogen overload, babies fed soy-based infant formula are being put at risk of developing a number of serious and irreversible health issues. So why do mothers still feed it and why are governments so reluctant to do anything but put warnings on obscure health department websites about its dangers? This investigation explores these issues citing extensive overseas research and asks why the New Zealand Government is not protecting the country's babies or at the very least providing good, highly visible information to parents so they can make an informed choice.

In my search for answers I have undertaken original research consulting worldwide studies and talking to internationally renowned scientists, as well as medical practitioners and Government officials. In doing so, this coverage fulfils journalism's role as the "Fourth Estate", serving the public interest and the public's right to know. It seeks to uncover the truth about soy infant formula –a matter of public interest, which has not received much attention from the media recently. This is important, because the media, as the "watchdog" for citizens, needs to counter the powerful who wish to hegemonise every walk of life.

The Marxist, Antonio Gramsci (1971), pioneered the theory of *cultural hegemony,* which refers to the power of the dominant elite to construct the idea of what constitutes "reality" or their concept of the world in a manner that is to be accepted by other classes as the only way or as the "common sense" and any other attempts to present a different view are, as a result, marginalised (Goldberg, 2001, p. 1).

There has been much criticism of science reporting so this exegesis will address the many issues associated with such writing, for instance, what kind of information reaches the public and what does not for various reasons. The exegesis discusses the problem of what gets lost in translation in the necessary shift from one form of rhetoric to another. Former editor of the New England *Journal of Medicine* Marcia Angell labeled some science articles as "over dramatic" stories for "gullible readers", but they are often the primary source of scientific education for the public (cited in Howell, 2008, p. 2). The motivation for this investigation is to provide first class science information on the topic of soy-based infant formula and thus provide parents with better information, information that is accurate and has not been hegemonised or distorted by vested interests This then will allow parents to make informed decision and perhaps protect the long-term health of their children.

Journalists covering the issue in the 90s, when New Zealand scientists first expressed concerns about soy formula, say they have felt the enormous power of the soy industry swiftly moving to immobilise dissent; power so great that it could also be felt in places such as New Zealand's largest newspaper offices. Former *New Zealand Herald* and *North&South* journalist Camille Guy (2011) says that after writing a story on soy phytoestrogen toxicity in the 1990s she had "trouble at work in the *Herald*" over her interest in covering stories on soy. Moreover, Guy says in the *Herald's* offices "it was understood that they wouldn't run soy stories". She says she "got the impression that there was a concern about advertising if they (*The Herald*) continued with publicity that was anti-soy" that "there might be problems with advertisers, food industry people". Although this information was relevant and newsworthy a decision was made not to include it in the final draft of the article because it may overcomplicate it and shift the direction of the investigation and change the main focus of the story, which is to inform parents about the potential health complications associated with soy phytoestrogens, and interfere with its main objective of serving as a catalyst for change.

As Herman and Chomsky (2002) noted in their book, *Manufacturing Consent: The Political Economy of the Mass Media,* the media are driven by advertising revenue. They avoid content with "serious complexities and disturbing

controversies that interfere with the buying mood" and instead will choose a coverage that lightly entertains (p. 17). Moreover, the duo say that in addition to avoiding "unfriendly" media outlets, advertisers usually choose more politically and culturally conservative programming. Large corporate advertisers are not likely to sponsor broadcasts that "engage in serious criticism of corporate activities, such as the problem of environmental degradation, the working of military-industrial complex, or corporate support or benefits from Third World tyrannies" (Herman & Chomsky, 2002, p. 17).

This applies to this project. As professor of nutrition at the Arizona State University Jeffery Hampl (2004) argues, the "commercial mass media and food industries exist for a common reason: to make money" (p. 364).

> Food industries (and the researchers they support) have not been as forthright with notifying the media with industry affiliations as they ought, and when relationships that may indicate a potential conflict of interest are not fully disclosed, information can be interpreted incorrectly. (Hampl, 2004, p. 367)

Advocating for change and providing crucial information is precisely why this kind of investigative journalism is so important for democracy, which would not exist without the free press serving its role as a "watchdog" and primary source of information for citizens. Herman and Chomsky (2002), say that everything broadcast as news by the mainstream media has been filtered and manipulated to suit various agendas and vested interests They maintain that the media are involved in "manufacturing consent" and are drawn into "symbolic relationship with powerful sources of information by economic and reciprocity of interest" (p. 18). The pair remind readers that if the "powerful are able to fix the premises of discourse, to decide what the general populace is allowed to see, hear, and think about, and to 'manage' public opinion by regular propaganda campaigns, the standard view of how everything works is at serious odds with reality" (p. xi). So, naturally the views of the media, they say, will reflect the views of the power elite.

Investigative journalism does not accept such secrecy and the reluctance of officials to provide information, instead it "finds out for itself" (Randall, 2000 ,p 100). The premise of this kind of journalism is not only to provide the public

with essential information, but also to perhaps "change lives for the better" (Randall, 200, p, 101). In the Pentagon Papers case of 1971, the American Government attempted to stop the publication of a secret study on the Vietnam War in the *New York Times* and the *Washington Post*. In his judgment Justice Hugo Black declared: "Paramount among the responsibilities of the free press is the duty to prevent any part of the government from deceiving the people" (cited in Livingstone & Hebert, 2005, p. 3). Investigative journalism however appears to be in decline and this, analysts argue, can have a devastating effect on society. Pioneering investigative journalist John Pilger (2004) stresses that without this kind of journalism "our sense of justice would lose its vocabulary and people would not be armed with the information they need to fight it" (p. 8).

Another critic of today's quickly-produced, profit-driven news media, Thomas Patterson (2000), says that journalism and democracy "share a common fate" and without their "watchdog" role, "journalists are reduced to propagandists or entertainers" (p. 9). Furthermore, Patterson says, today's news "is increasingly based on what will interest an audience rather than on what the audience needs to know" (p. 3). This type of news has been identified as "soft news" or all news that is not "hard news". Hard news is defined as coverage of breaking events concerning "top leaders, major issues, or significant disruption in the routines of daily life, such as an earthquake or airline disaster". "Information about these events is presumably important to citizens' ability to understand and respond to the world of public affairs. News that is not of this type is, by definition, soft" (p.3). Often this kind of "soft news" is very close to tabloid types of "infotainment", and predominant importance has been placed on the sensationalised, the hype, the dramatised, Patterson says. Although, soft news may provide information, some argue it poses a nett cost to democracy by reducing the quality of public information and discourse. In the words of Neil Postman, by indulging in this kind of infotainment we risk amusing ourselves to death" (Postman as cited in Patterson, 2000, p. 3). This project is aimed not at entertaining, but rather at serving the public and its interests by providing critical information for parents, which may have otherwise remained hidden.

If the very existence of democracy is based on the free press' ability to operate as the "Fourth Estate", a watchdog providing checks on those in power and serving the public and its interests, then we now need "watchdog" journalism more then ever. The ideal of the news media's role as the "Fourth Estate" is at the root of investigative journalism, which long has been identifiable as serving the public and the public interest by providing checks on, "society and its institutions, whether in government, business or judiciary" (Ricketson, 2001, p. 1). So, mothers and fathers have the right to know what is in their babies' food regardless of whose interests that may interfere with. In the words of New Zealand's own investigative author, Nicky Hager, an essential part of the function of the free press is "that journalists can cut through attempts by vested interests to mislead the public" (as cited in Mercer, 2010). Therefore, it is important that parents are informed about recent scientific developments.

And it is essential that the media provides this information for parents, because as studies show, people rely on the media to provide them with information about any scientific developments or news. In her book *Reconstructing Science for Public Consumption Journalism as Science Education*, Sharon Dunwoody (1993) states that by and large the public gets the bulk of its information about science and technology from the mass media. In the US the media provides health education in the way of "timely, accurate information" and it is cited as a primary source of health information for the public (Brechman Lee Cappella, 2009, p. 454). And perhaps that is why it is so important for journalists to inform the public of any scientific developments or findings that may affect their daily lives or health.

There are many issues associated with science writing. For example, many science journalists seem to follow the herd and the different media outlets seem to be reporting the same stories at the same time (Kiernan, 2006). And as a result many are asking the question:

> Does media coverage offer virtual reflection of science 'out there', or is our daily diet of science, medicine and environment more like a stew prepared by some anonymous yet powerful chief with fondness for certain ingredients but not for others? (Dunwoody, 1993, p. 3)

A particular cause for concern, for some commentators, is the policy of placing embargoes on scientific reports. This issue associated with science writing is highlighted by Vincent Kiernan (2006) in his book *Embargoed Science*. He asserts that embargoes on science may be not only partly responsible for the uniform reporting across all media outlets, but also for distorting the public's understanding of science in today's world. The embargo system is cooperation between scientific sources of information, such as medical and science journals, in which information is provided to journalists with the agreement that they would not be published until the embargoed time arrives (Whitehouse, 2007). The *Independent* science writer, David Whitehouse says that with the embargo system and the convenience of the internet it is now possible to toss out story after story, without leaving one's chair. He notices that as a result science reporting across different outlets appears indistinguishable and uniform. Critics see this kind of reporting as "suppressing journalistic independence" and investigative journalism by "presenting an easy-to-use system that promotes laziness" (Erickson, 2007, p. 509). This means that the public is provided with an:

> …homogenized and inaccurate version of what science is – a major problem in that it is the public who effectively pay for much of science, yet are receiving science news that is, at best, a reflection of a distorted picture that is the product of a few journal editors' decisions on what should be the news agenda. (Erickson, 2007, p. 509)

Problematic for science writing is also the fact that perhaps more often than not the editor's decision on what story makes the news is based solely on entertainment value (Patterson, 2000). A 2011 study conducted by the researchers from Kings Collage and the London School of Hygiene and Topical Medicine reports "accuracy and solid scientific background is being sacrificed for the entertainment element". As the doctor and weekly columnist for the *Guardian,* Ben Goldacre (2011) says: "It would be nice if we could say the media has learned their lesson and recognised the importance of scientific evidence, rather than one bloke's hunch." Angell considers the vested interests of media organistions. "Newspapers are in the business of telling you the news, which needs to be startling or counterintuitive or flies in the face of what we knew" and this has an influence on what kind of stories make it into the news

(cited in Howell, 2008, p. 2). Scholars say that not only do science stories have to be entertaining to be considered by editors, they also have to be presented by journalists in a certain manner to make them more appealing for the reader.

Issues in science writing also arise because uncertainty is a fundamental part of science and reporters need to somehow present this "uncertainty" as facts in publications created for communication outlets (Friedman, Dunwoody & Rogers, 1999). Scientific "uncertainty" involves the pioneering of knowledge about what was formerly unknown and it is a necessary and permanent characteristic of any scientific work. And that is why creating a mass media science story is such a daunting process. Every single, "tale in a newspaper, on a TV news programme or on a website is the product of a complicated dance between scientists and journalists, both trying to cast the story in ways that make sense to them" (p. 59). Social scientists Eleanor Singer and Carol Weiss found that in that "dance" findings are often transformed from provisional into certain (cited in Friedman, 1999).

This may happen because science journalism and scientific reports and data use different rhetorics and require, "the adjustment of new information to an audience's already held values and assumptions" (Fahnestock, 1998, p. 334). Aristotle identified three different types of persuasive speech, "forensic, deliberative, and epideictic– according to purpose, audience, situation, and the time domain concerned", says Fahnestock in his article *Accommodating Science: The Rhetorical Life of Scientific Facts.* He identified "forensic oratory" as the oratory of the law courts where the nature and cause of past events is argued; "deliberative oratory" as situated in "legislative assemblies" convened to "debate the best possible course of future action" and "epideictic oratory", as involving the "here and now" judgment over whether something deserves praise or blame (p.333). Funerals and awards ceremonies are the natural settings for epideictic discourse that ultimately aims at "solidifying the values of its audiences". Scientific reports can be identified largely as "forensic" discourse because they are mostly concerned with the establishing of the "validity of the observation they report; thus showing the predominance of the 'materials', methods'. The 'results' sections in the standard format of the

scientific paper has prominence given to tables, figures, and photographs" that represent evidence for the "research generated" (p. 333). Scientific reports, however, are also to a certain extent "deliberative"; they create a reason for their analysis or why they are conducting a particular study. "Accommodations" of scientific reports, such as, media reports are in contrast not primarily "forensic", but are overwhelmingly epideictic in nature (p. 333). The problem arises when "under the pressure of this genre shift from the forensic to the epideictic" or from science study to news story, "something happens to the information from one kind of discourse to another" and as a result it appears to have changed (p. 334). As a result the information contained in the final new report would appear to have been changed during the transition.

Jean Brechman, Chul-joo Lee and Joseph Cappella (2009) from the University of Pennsylvania suggest that in many cases the difference between a press release and the subsequent story is inconsistent by about 40 per cent (p. 453). Many of the studies consulted for this project also highlight that different media outlets cover the same scientific developments in an analogous manner, which is perhaps problematic.

> Often, a front page science story will emerge from a press release alone, and the formal academic paper may never appear, or appear much later, and then not even show what the press report claimed it would. (Goldacre, 2005, p. 2)

Science reporting also gets a makeover when, as highlighted by Sharon Friedman et al (1999), journalists who are essentially trying to tell a story to their audience, quite naturally "think in terms of anecdotes to present the news" (p .228). The trio says that although anecdotes can provide excellent examples, they are poor evidence in scientific news. A good description of how that is done is given in Dorothy Nelkin's book *Selling Science.*

> Suppose it's Halley's Comet. Well, first, you have a half-page decoration showing the comet…. If you can work a pretty girl into the decoration, so much the better. If not, get some good nightmare idea like inhabitants of Mars watching it pass. Then you want a quarter of a page big type heads…and a two-column boxed freak containing a scientific opinion which nobody will understand, just to give it class.

(Nelkin, 1987, p.78)

The problem with anecdotes is that they affect judgment (Friedman et al, 1999). Moreover, people often use *heuristics* or judgment shortcuts to *make* sense of things "which could bias their judgment" (p. 229). Dramatic anecdotes, which are associated with news coverage "could influence a person's judgment of risk and should be employed carefully by journalists" (p. 229). With this in mind, it was agreed with my supervisor in the preparatory stage not to use parents as sources. There was so much information of a seriously complex scientific nature and several areas of dispute to be covered that the article would keep very much to the facts of the case. However, a companion piece at a later date talking to mothers, nutritionists, health food activists and early childhood experts etc would be a good follow up.

Contemporary science reporting "reflects early efforts to adopt the norms of scientific objectivity to the practice of journalism" (Nelkin, 1987, p. 84). However, it has become clear in more recent years that real "objectivity" is perhaps an unattainable myth, says Nelkin, and all that is possible is the journalists' ideal of neutrality and non bias in presenting diverse points of view, giving every side of the argument the equal opportunity to comment. In my quest for answers I have striven to avoid the pitfalls associated with science journalism as outlined above in every step of the investigation. I did not follow the herd and my story is not the love child of a press release and embargoed science, but it is based on primary research. I consulted a vast number of scientific studies and reports; information released under the Official Information Act and conducted a large number of interviews internationally.

To complete this project to a satisfactory level the methodology employed was in compliance with what David Randal (2000) identifies in his book *The Universal Journalist,* as the distinguishing features of investigative journalism, which make it different from any other kind of journalism. Randall stresses that investigative reporting is "not a summary or piecing together of others' findings and data, but original research carried out by journalists often using the rawest of material" (p. 99). This, he says, includes "extensive interviewing" and

revealing previously unknown “connections” or “patterns”.

As already explained I researched an immense number of international scientific studies on soy-based infant formula. To ensure the reliability of the findings or to establish if they were what science journalists call “good science”, most of the studies consulted had been through science’s own peer review system. This is important in ensuring that the information communicated in the article is based on sound evidence. Former *New York Times* science writer Boyce Resberger (1997) points out the importance of the peer review process in his work *Covering Science for Newspapers*. “The peer review system is a time-tested way to minimize the odds that a misunderstanding is promulgated to the world at large. Science writers who ignore the system risk misleading their readers and embarrassing themselves” (p. 12).

Because the nature of investigative journalism is to seek to uncover and reveal the truth about matters of public concern, “investigative journalists are required to stick to truth-adhering methods” (De Burgh, 2000, p. 157). In my quest for the truth I have done my very best to use only authentic and trustworthy interviewees and to verify their claims whenever possible. I have gone after “what someone wants to hide”, because “authority may have an agenda that is counter to the general interest; because there are officials and politicians who are swayed by ignorance and self-interest; because there are systems that work to the detriment of people who have no voice” (De Burgh, 2000, p. 12).

The interviewees ranged from government agencies and officials to medical practitioners, nutritionists and top research scientists, both in New Zealand and overseas.

At the beginning of this inquiry an overwhelming quantity of internal New Zealand Ministry of Health documents, personal communications and information released under the Official Information Act dating as far back as 1994 was consulted. A troubling theme in other data collected was the number of journalists and scientists who were being subjected to intimidating tactics for

trying to raise the issue of soy-based infant formula in a public forum. New Zealand toxicologist Dr Mike Fitzpatrick (2011), formerly employed by Grayson Laboratories, for example, was told to "cease all communication with the media" on the subject of possible soy phytoestrogens toxicity or risk losing his job (personal communication).

This investigation would also perhaps differ from the mainstream media publications because the topic was chosen not because of its entertainment value but because it is of significant public interest and the public has a right to know about it, especially parents of young babies. Therefore, this project can be identified as "hard" news and the information could have a profound effect on the long-term health of millions of babies around the world who are currently being fed soy-based infant formula.

The investigative piece is not an over-sensationalised interpretation of one report's probable findings containing well-maneuvered scare tactics. Instead it is a fulfillment of the science reporter's job to "take complicated subjects and translate them for readers who are not scientifically sophisticated" (Howell, 2008, p.1). However, this is not a dumbed-down version of a scientific report's findings. It is rather, a balanced synthesis of different findings and data, extensive interviewing of internationally recognised scientists, and medical practitioners and Government agencies and officials without the employment of overdramatised anecdotes to try and appeal to a wider reader demographic.

Although this article investigates the issues on a global scale it has been written to suit a New Zealand audience. But it was surprising that a search for articles on possible soy formula toxicity returned no publications after 2007 in New Zealand. None of the locally-based interviewees I asked were able to provide an answer to the question of why that might be. It appears the last few times the issue has been covered by the media was when a 2007 health committee recommended better labeling for soy-based baby formula. And even then, the announcement perhaps did not receive the attention it deserved. One of the more notable broadcasts was done by Radio New Zealand, which reported in 2007 that: "Soy formula contains high phytoestrogen content, which can pose a risk for infants' long-term reproductive

health as well as causing them to enter puberty earlier than usual." It appears nobody took any notice of this warning. Because of the dearth of media coverage the issue has not received much political attention. That is why I am alerting the public, because is important that accurate, essential information reaches parents (Hampl, 2004) and what better way than through the media, who are a key source of scientific information. This work strives to enhance the public's capacity to evaluate the soy-based infant formula issue and provide parents with the ability to make an informed personal choice of whether or not they should give soy formula to their babies given the possibility of complications as highlighted by scientific research.

The quest to provide the best possible and diversely sourced information for readers created many difficulties. A profuse number of scientific studies, reports, personal communications, interviews etc, which were collated, needed to be interpreted and the key aspects distilled for the final report. Another difficulty occurred in trying to present all this complicated information in a readable, yet not "dumbed down" way. The "dumbing down" in the media is done because "papers think you won't understand the 'science bit', so all stories involving science must be dumbed down" (Goldacre, 2005, p. 2). In this investigation a conscious decision was made to leave in much longer and more comprehensive quotes than would appear in most journalism today in an effort to make the science as comprehensive and transparent to the reader as possible and leave as little room for misunderstanding or doubt as possible.

In conclusion, overwhelming and compelling scientific evidence suggests that the phytoestrogens present in soy-based infant formula could irreversibly damage the long-term health of infants. Despite that, many governments are reluctant to go any further than issuing warnings, which may never reach parents, if that. International scientists interviewed for this project expressed growing concern that authorities have ignored the scientific evidence and as a result babies have been put at risk of developing a number of serious health issues later in life. Scientists say that experimenting with babies is taking a step too far, and authorities should act to protect the infant population. It is of the utmost necessity that in situations like this, the media fulfils their purpose of a 'watchdog', providing checks on powerful

entities no matter how influential they may happen to be. This investigative piece serves the public's interest providing parents with essential and reliable scientific information they need to evaluate the advantages and disadvantages of soy-based formula use and decide if it is wise to give it to their babies. Great care was taken that the information provided in this investigation was not corrupted by the many pitfalls of science writing, and it does not seek to entertain or over sensationalise. Instead care was taken to present the views and source statements from each side of the soy debate in the service of balance. Both sides of the debate were treated fairly and given the opportunity to comment. In order to preserve accuracy some quotations were kept in length to make science statements as transparent and categorical as possible. And, as a result of this investigation New Zealand parents should be able to make important decisions about what to feed their child.

References

Agostoni, C., Axelsson, I., Goulet, O., Koletzko, B., Michaelsen, K., Puntis, J., Rieu, D., Rigo, J., Shamir, R., Szajewska, H., & Truck, D. (2006). Soy protein infant formulae and follow-on formulae: A commentary by the ESPGHAN Committee on nutrition. *Journal of Pediatric Gastroenterology and Nutrition, 42,* 352-361.

American Soybean Association. (2010, December). *CEO report to the board & states.* Retrieved March 15, 2011, from http://www.soygrowers.com/publications/ceo/reports/dec10.htm

Archer Daniel Midland. (2011, February 1). *ADM reports 30 percent increase in second-quarter EPS.* Retrieved March 15, 2011, from http://www.adm.com

The Archer Daniels Midland website provides information about the company's profit, practices and associations (http:///www.adm.com).

Australian Department of Health (personal communication, June 27, 2011) answered questions on soy-based infant formula.

Australian Government. (2011). Australia New Zealand food standards code-standard 2.9.1-infant formula products (Reference F2011C00547). Australia: Agency. Retrieved October 24, 2011, from http://www.comlaw.gov.au/Details/F2011C00547

Badger, T., Ronis, M., & Hakkak, R. (2001). Developmental effects and health aspects of soy protein isolate, casein, and whey in male and female rats. *International Journal of Toxicology, 20*(3), 165-174.

Barlas, S. (2008). FDA science base badly eroded: But will congress provide urgent new funding?. *Pharmacy & Therapeutics*, *33*(3), 130.

Berger-Achituv, S., Shohat , T., Romano-Zelekha, O., Ophir, E., Rachmani, S., Malovizky, D., & Garty, B. (2005). Widespread use of soy-based formula without clinical indications. *Journal of Pediatric Gastroenterology and Nutrition*, *41*, 660-666.

Bhatia, J., Greer, F., & the Committee on Nutrition [Electronic version]. (2008). Use of soy protein-based formula in infant feeding. *Pediatrics, 121,* 1062-1068

Brechman, J., Lee, C., & Cappella, J. (2009). Lost in translation?: A comparison of cancer-genetics reporting in the press release and its subsequent coverage in the press. *Science Communication*, *30*, 453-471.

Brown, H. (2009, May 5). What beans mean. *The Independent*, p.12-13.

Blum D., & Knudson, M. (1997). *Field guide for science writers*. New York: Oxford University Press.

Boyle, M. (2011, March 10). Soy takes its place on America's dinner table. *Bloomberg Business week*. Retrieved March 29, 2011, from Canadian Pediatric Society. (2009). Concerns for the use of soy-based formulas in infant nutrition. *Paediater Child Health*, *14*(3), 109-13.

Calabresi, M. (2010, August). After Avandia: Does the FDA have a drug problem?[Electronic version]. *Time.* Retrieved July 19, 2011, from http://www.time.com/time/printout/0,8816,2010181,00.html

The Canadian Ministry of Health website provided information about its practices and regulations in regards to soy-based infant formula (http://hc-sc.gc.ca)

Cassidy, A., Brigham, S., & Setchell, K. (1994). Biological effects of a diet of soy protein rich in isoflavones on the menstrual cycle of premenopausal women. *American Journal of Clinical Nutrition*, *60*, 333-340.

Cimafranca, M., Davila, J., Ekman, G., Andrews, R., Neese, S., Peretz, J., Woodling, K., Helferich, W., Sarkar, J., Flaws, J., Schantz, S., Doerge, D., & Cooke, P. (2010). Acute and chronic effects of oral genistein administration in neonatal mice. *Biology of Reproduction*,*83*(n1), 114-121.

Condit, C. (2004). Science reporting to the public: Does the message get twisted?. *Canadian Medical Journal*, *170*

Conko, G., & Arnett, J. (2008, August 13). FDA's bad medicine: How the dispersed knowledge problem affects drug safety analysis. *Competitive Enterprise Institute*, *143*. Retrieved *September* 15, 2011, from http://cei.org

Cromwell, D. (2002). The propaganda model: An overview. *Private Planet.*

Culf, A. (1996, November 23). Martin Bell slates neutral reporting. *The Guardian,* p.8.

Daniel, K. (2007). *The whole soy story: The dark side of America's favourite health food.* Washington: New Trends Publishing.

De Burgh, H. (2000). *Investigative journalism: Contest and practice.* London and New York: Routledge.

Department of Health. (2004). Advice issued on soya-based infant formulas. United Kingdom: Sir Liam Donaldson. Retrieved May 5, 2011, from http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4070176.pdf

Department of Health. (1996). *Advice on soy-based infant formula* (Reference 96/244). London: Department of Heath.

Dodgy science is a bad medicine. (2010, February 7). Retrieved 7/02/2011, from http://www.nzherald.co.nz/news/print.cfm?objectid=10624573&pnum=2

Doerge, D. (2011). Bioavailability of soy isoflavones through placental/lactational transfer and soy food. *Toxicology and Applied Pharmacology, 254,* 145-147.

Doerge, D., Twaddle, N., Churchwell, M., Newbold, R., & Delclos, B. (2006). Lactation transfer of the soy isoflavone, genistein, in Sprague-Dawley rats consuming dietary gensistein. *Reproductive Toxicology , 21, 307-312.*

Doerge, D., Churchwell, M., Chang, H., Newbold, R., & Delclos, K. (2001). Placental transfer of soy isoflavone genistein following dietary and gavage administration to Sprague Dawley rats. *Reproductive Toxicology, 15*, 105-10.

Divi, R., & Doerge, D. (1996). Inhibition of thyroid peroxidase by dietary flavonoids. *Chemical Research in Toxicology,9*, 16-23.

Doran, C. (1988). The 'problem' of science and the media: A few seminal texts in their context. *Journal of Communication Inquiry, 12,* 53-70.

Dunwoody, S. (1993). *Reconstructing science for public consumption: Journalism as science education.* Melbourne*:* Deakin University Press.

Euromonitor International. (2011, January 10). *Baby food in the US.* Retrieved March 3, 20011, from http://www.portal.euromonitor.com.ezproxy.aut.ac.nz

Euromonitor International. (2010, December 15). *Baby food in New Japan.* Retrieved March 3, 2011, from http://www.portal.euromonitor.com.ezproxy.aut.ac.nz

Euromonitor International. (2010, December 13). *Baby food in New Zealand.* Retrieved March 3, 2011, from http://www.portal.euromonitor.com.ezproxy.aut.ac.nz

Euromonitor International. (2010, November 8). *Baby food in New Bulgaria.* Retrieved March 3, 2011, from http://www.portal.euromonitor.com.ezproxy.aut.ac.nz

Euromonitor International. (2010, October 26). *Baby food in Indonesia.* Retrieved March 3, 2011, from http://www.portal.euromonitor.com.ezproxy.aut.ac.nz

Fahnestock, J. (1998). Accommodating science: The rhetorical life of scientific facts. *Written Communication, 15,* 330-350.

Fisher, D. (n.d). *Let me be a campaigner, says 'leftie' Campbell.*

Fitzpatrick, M. (2000). Soy formula and effects of isoflavones on the thyroid. *New Zealand Medical Journal, 113,* 24- 26

Fitzpatrick, M., & Dibb, S. (1998). Soya infant formula: The health concerns and addendum [a Food Commission briefing paper]. London: Dr Mike Fitzpatrick & Sue Dibb.

Fitzpatrick, M. (1998). Soy isoflavones: Panacea or poison? *Price-Pottenger Nutrition Foundation Journal, 22*(3), 3-7.

Fitzpatrick, M. (1994). *The toxicity of soybeans and related products.* Auckland: Valerie James and Richard James.

French Food Safety Agency. (2008). *Modification of nutrition labelling: Proposal, arguments and research avenues.* France: AFSSA.

French Food Safety Agency. (2007). Protein and amino acids intake: consumption, quality, requirements and recommendations (Reference 2004-SA-0052). France: AFSSA.

French Food Safety Agency. (2005). *Safety and Benefits of Phytoestrogens in Food-Recommendations* (Reference 2002-SA-0231). France: AFSSA.

French Agency for Food, Environmental and Occupational Health & Safety. (n.d). *Total Diet Studies.* Retrieved June 6, 2011, from http://www.anses.fr/index.htm.

Friedman, S., & Dunwoody, S., & Rogers, C. (1999). *Communicating uncertainty: Media coverage of new and controversial science.* New Jersey: Lawrence Erlbaum Associates.

Food Standards Australia New Zealand. (personal communication, October 24, 2011) the agency announced they are preparing to review and potentially revise Standard 2.9.1 in the light of the new Guideline and look at new evidence about the health effects of consumption of soy infant formula.

German Consumer Watchdog organisation warns citizens about the dangers of soy infant formula and soy isoflavones supplaments. (2007, December 6). Retrieved March 15, 2011, from http://www.blog.wholesoystory.com

Global Industry Analysts. (2012, February). *Soy foods-A global strategic business report* [an abstract]. Retrieved March 15, 2011, form http://www.StrategR.com

Goldarce, B. (2011, April 9). When journalists do primary research. *The Guardian.*

Goldarce, B. (2005, September 8). Don't dumb me down. *The Guardian.*

Goldberg, M. (2001). *Hegemony.* Retrieved December 20, 2011, from http://www.faculty.washington.edu/mlg/course/definitions/hegemony.html.

Greens support stronger warnings on soy infant formula. (2007, December 17). Retrieved December 17, 2011, from http://www.healthy.co.nz/news/538-greens-support-stronger-warnings-on-soy-infant-formula.html

Green Party. (2002, March 21). *Ministry of Health warning on soy formula ignored* [Press release]. Retrieved from http://www.greens.org.nz/press-releases/ministry-health-warnings-soy-formula-ignored

Greenslade, R. (2003, February 27). Speaking with their master's voice. *Guardian Weekly,* p.22.

Guo, T., White, K., Brown, R., Delcos, K., Newbold, R., & Weis, C. (2002). Genistein modulates splenic natural killer cell activity, antibody-forming cell response, and phenotypic marker expression in F(0) and F(1) generation of Sprague-Dawley rats. *Toxicology and Applied Pharmacology*, 181, 219-27.

Guy, C. (n.d). *Soy under suspicion.* Unpublished manuscript.

Hager, N. (2001). *Investigating public relations companies.* Retrieved April 29, 2010, from http://www.nickyhager.info

Hager, N. (2003). *We've put pragmatism before our principles.* Retrieved April 29, 2010, from http://www.nickyhager.info

Hager, N. (2004). *Noam Chomsky: Hegemony or survival, America's quest for global dominance.* Retrieved April 29, 2010, from http://www.nickyhager.info

Hager, N. (2007). *Back story.* Retrieved April 29, 2010, from http://www.nickyhager.info

Hager, N. (2009). *Crosby v Hager: Defamation proceedings used as a political weapon.* Retrieved 29/04/2010, from http://www.nickyhager.info

Hager, N (2009). *Dying for invitation to Washington.* Retrieved April 29, 2010, from http://www.nickyhager.info

Halliday, J. (2011, April 22). Study slams UK media for unsubstantiated dietary info. Retrieved July 17, 2011, from http://www.foodnavigator.com/science/story/study-slams-UK-media-for-unsubstantiated-info

Hampl, J. (2004). Conflict of interest and hyperbole: Nutrition in the media. *Journalism and Mass Communication Educator, 58,* 364-372.

Hapgood, F. (1987). Soybean. *National Geographic, 172I*(1), 66-91.

Hawkins, G. (2002, March 21). Ministry of Health warning on soy formula ignored. *Scoop.* Retrieved March 22, 2011, from http://www.knowledge-basket.co.nz.ezproxy.aut.ac.nz/search/doc_view.php?d3=scoop/text/2002/03/21/200203211333-a5d1264.html

Herman, E., & Chomsky, N. (1988). *Manufacturing consent: The political economy of the mass media.* United States: Pantheon Books.

Herman, E. (2000). The propaganda model: A retrospective. *Journalism Studies, 1:1,* 101-112.

Hirst, M., & Patching R. (2009). *Journalism ethics: Arguments and cases.* Melbourne, Australia: Oxford University Press.

Howell, D. (2008, December 7). Making sense of science reporting. *The Washington Post.*

House of Representatives. (2007). *Petition 2005/123 of Valerie Ann James and 214 others: Report of the Health Committee* (Reference 2005/123). Wellington: Barbara Steward.

House of Representatives. (2007). Government response to report of Health Committee on 14 December 2007. Wellington. Retrieved June 21, 2011, from http://www.parlament.nz/NR/rdonlyres/D57038F9-870D-4D0D-4DD7-8B70-D4485ECF5171/89001/DBHOH-PAP_16353

Hyde, T. (1997, April). Bean there, done what? *Metro,* 68-76.

Infant and Dietetic Food Association. (1995). *Phytoestrogens and soya infant formulas* [Released under the Official Information Act]. London: IDFA.

The Infant Nutrition Council website provided information about the purpose of the agency and about its members (http://www.infantnutritioncouncil.com)

Irvine, C., Fitzpatrick, M., & Alexander, S. (1998). Phytoestrogens in soy-based infant foods: Concentrations, daily intake and possible biological effects. *Proceeding of the Society for Experimental Biology and Medicine, 217,*247-253.

Irvine, C., Shang, N., Fitzpatrick, M., & Alexander, S. (1998). Daily intake and urinary excretion of genistein and daidzein by infants fed soy- or dairy-based infant formulas. *American Journal of Clinical Nutrition*, *68*, 142S-5S.

Irvine, C., & Fitzpatrick, M. (1998). Pytoestrogens in soy-infant foods: Concentrations, daily intake and possible biological effects. *Proceeding of the Society for Experimental Biology and Medicine, 217*, 247-253.

Jefferson, W., Doerge, D., Padilla-Banks, E., Woodling, K., Kissling, G., & Newbold, R. (2009). Oral exposure to genistin, the glycosylated form of genistein, during neonatal life adversely affects the female reproductive systems. *Environmental Health Perspectives, 117,* 1883-1889.

Jefferson, W., Padilla-Banks, E., & Newbold, R. (2005). Adverse effect on female development and reproduction in CD-1 mice following neonatal exposure to the phytoestrogen genistein at environmentally relevant doses. *Biology of Reproduction, 73,* 798-806.

Jefferson, W., & Couse, J., & Padilla-Banks, E., & Korach, K., & Newbold, R. (2002). Neonatal exposure to genistein induces estrogen receptor (ER) alpha expression and multioocyte follicles in the maturing mouse ovary: evidence for ERbeta-mediated and nonestrogenic actions. *Biology of Reproduction, 67*, 1285-96.

Kieran, V. (2006). *Embargoed science.* Urbana: University of Illinois Press.

Lean, G. (2011, January 8). GM: New study shows unborn babies could be harmed. *The Independent.* Retrieved March 29, 2011, from http://www.independent.co.uk/environment/gm-new-study-shows-unborn-babies-could-be-harmed-522109.html?service=Print

Logan, R., & Zengjun, P., & Wilson, N. (2000). Prevailing impressions in science and medical news: A content analysis of the Los Angeles Times and the Washington Post. *Science Communication, 22:27,* 28-45.

Logan, R., & Zengjun, P., & Wilson, N. (2000). Science coverage in the *Los Angeles Times* and the *Washington Post:* A six-year perspective. *Science Communication, 22,* 5-26.

Loscutoff, S. (official letter response, July 1, 1998) said she does not agree parents have a right to know soy-based formula contains isoflavones.

Medill School of Journalism. (1999). *Protess, students share their lessons.*

Meikle, J. (2002, October 15). Scientists call for plant hormones research. *The Guardian.* Retrieved February 16, 2011, from http://www.guardian.co.uk/uk/2002/oct/15/society.science/print

Mercer, B. (2011). *The importance of being earnest- a discussion of investigative journalism in New Zealand and why it is important in maintaining general journalistic standards and the healthy function of our democracy.* Lecture presented for the paper Investigative Journalism. AUT University, Auckland, New Zealand.

Ministry of Health. (2005). *Soy-based infant formula-parent information*. New Zealand: Ministry of Health.

Ministry of Health. (1998). *Soy-base infant formula (*Reference ISBN 0-478-22889-9*).* Wellington: Dr Pat Tuohy.

Mundy, A. (2009, January 8). FDA scientists ask Obama to restructure drug agency. *The Wall Street Journal.* Retrieved July 19, 2011, from http://online.wsj.com/article/SB123142562104564381.html#printMode

Murphy, J., Ward, S., & Donovan, A. (2006). Ethical ideals in journalism: Civic uplift or telling the truth?. *Journal of Mass Media Ethics, 21,* 322-337.

National Center for Toxicological Research. (1998). [Official letter opposing GRAS status for isoflavones]. Jefferson: Dr D. Sheehan & Dr D. Doerge.

The National Security Archive. (2001). *The Pentagon Papers: Secrets, lies and audiotape* (Reference book 48). Washington: Thomas Blanton.

Nelkin, D. (1987). *Selling science.* New York: W. H. Freeman and Company.

Newbold, R. (2004). Lessons learned from perinatal exposure to diethylstilbestrol. *Toxicology and Applied Pharmacology*, *199*, 142-50.

Newbold, R., Padilla-Banks, E., Bullock, B., & Jefferson, W. (2001). Uterine adenocarcinoma in mice treated neonatally with genistein. *Cancer Research*, *61*, 4325-8.

Newbold, R., Bullock, B., & McLachlan, J. (1990). Uterine adenocarcinoma in mice following developmental treatment with estrogens: A model for hormonal carcinogenesis. *Cancer Research*, *1;50*(23), 7677-81.

New Zealand Embassy in France (personal communication, June 2011, 2011) provided help with the investigation.

New Zealand Ministry of Health (personal communication, August 16, 2011) said advice on soy-based infant formula is available to the public and health professionals in public health education resources.

CNN Money. (2011). Fortune 500. Retrieved September 16, 2011, form http://www.money.cnn.com/magazines/fortune/fortune500/2011/full_list/

Pankhurst, T. (2008). The power of print remains undiminished. *Pacific Journalism Review, 14*(1), 33-43.

Patterson, T. (2000). *Doing well and doing good: How soft news and critical journalism are shrinking the news audience and weakening democracy-and what news outlets can do about it.* Boston: Harvard University.

Phillimore, J. (2000, August 27). Soya-bean crisis: Scientists versus the soya industry. *Observer.* Retrieved February 16, 2011, from http://www.soyonlineservice.co.nz/articles/Philimore.htm

Phillimore, J. (2000, April 30). Soya and babies: A risky formula? *Mail on Sunday,* p. 37.

Pilger, J. (2004). *Tell me no lies: Investigative journalism and its triumphs.* London: Jonathan Cape.

Plunket (personal communication, May 26, 2011) said any advice Plunket gives is based on health policy, legislation and clinical guidelines provided by the Ministry of Health.

Radio New Zealand Wire. (2007, December 14). *Call for stronger labels on soy infant formula.* Retrieved March 22, 2011, from http://www.knowlege-basket.co.nz.ezproxy.aut.ac.nz/search/doc_view.php?d54=rnzdb/text/2007/dec/15/15bc5b60.html

Randall, D. (2000). *The universal journalist.* London: Pluto Press.

Richards, A. (2006). The minefield of food allergy. *New Zealand Doctor.* Retrieved March 22, 2011, from http://www.knowledge-basket.co.nz.ezproxy.aut.ac.nz/search/doc_view.php?d5=magz/text/doctor/2006/Nov/doc0947.html

Ricketson, M. (2001). *The importance of investigative journalism –of journalism.* Retrieved April 10, 2010, from http://abc.net.au/4corners/4c40/essays/ricketon.htm

Royal Australian Collage of Physicians. (2006). *Paediatric Policy: Soy protein formula* (Reference RACP 2006). Sydney: Dr Pat Tuohy and Dr Velencia Soutter.

Royal New Zealand College of General Practitioners. (1999). *GPs join calls for caution on soymilk for infants.* Wellington: Royal New Zealand Collage of General Practitioners.

Schudson, M., & Haas, D. (2009, March 22). Too good to be true? *Columbia Journalism Review,* p. 1-4.

Science Advisory Committee on Nutrition. (2003). *Paper discussion: Soya based infant formula* (Reference SMCN). United Kingdom: SACN.

Setchell, K. (2001). Soy isoflavones-benefits and risks from nature's selective estrogen receptor modulators (SERMs). *Journal of the American Collage of Nutrition, 20*(5), 354S-362S.

Setchell, K., Gosselin, s., & Welsh, M., Johnston, J., Balistreri, W., Kramer, L., Dresser, B., & Tarr, M. (1987). Dietary estrogens-a probable cause of infertility and liver disease in captive cheetahs. *Gastroentrology, 93, 225-233.*

Sheehan, D. (1998). Herbal medicines, phytoestrogens and toxicity: Risk benefit considerations (44248). *Proceeding of the Society for Experimental Biology and Medicine, 217*(3), 379-85.

Sheehan, D. (1997). Isoflavone content in breast milk and soy formulas: Benefits and risks [letter]. *Clinical Chemistry, 43*, 850.

Shwartz, L., & Woloshin, S. (2009, October 21). Lost in translation-FDA drug information that never reaches clinicians. *NEJM.* Retrieved July 19, from http://www.healthpolicyandreform.nejm.org/?p=2126

Siegel-Itzkovich, J. (2005). Health Committee warns of potential dangers of soya. *British Medical Journal, 331*, 254-a.

Snow, N., & Taylor, M. (2006). The revival of the propaganda state. *The International Communication Gazette, 68*(5-6), 389-407.

The Soy Stats website provides a reference guide to soybean facts and figures and information about the soybean industry in relation to the worlds soybean production (http://www.soystats.com)

Strom, B., Schinnar, R., Ziegler, E., Barnhart, K., Sammel, M., Macones, G., Stallings, V., Drulis, J., & Nelson, S., & Hanson, S. (2001). Exposure to soy-based formula in infancy and endocrinological and reproductive outcomes in young adulthood. *JAMA, 286*(7), 807-814.

Swiss Federal Health Service. (1992). *Bulletin de L'Office de la Santa Publique* (Reference 28). Sweden : Swiss Federal Health Service.

Tan, K., Walker, M., Moris, K., Greig, I., Mason, J., & Sharpe, R. (2006). Infant feeding with soy formula milk: Effects on puberty progression, reproductive function and testicular cell numbers in marmoset monkey in adulthood.

Human Reproduction, *21*(4), 896-904.

Taylor, P. (2003). *A history of propaganda.* Manchester: Manchester University Press.

Taflinger, R. (1996). *The myth of objectivity in journalism.* Retrieved 10/04/2010, from http://www.wsu.edu/~taflinger/mythobj.html

Tso, E. (1928). The development of an infant fed eight months on a soybean milk diet. *Chinese Journal of Physiology, 11*(1), 33-40.

Tuohy. P. (2003). Soy infant formula and phytoestrogens. *Journal of Paediatrics and Child Health, 39,* 401-405.

United Kingdom Department of Health. (personal communication, September 28, 2011) answered questions on soy-based formula.

United Kingdom Department of Health. (1996). *Advice on soy based formula* (Reference 96/244). United Kingdom: Department of Health.

The United Kingdom Department of Health website provided information about international policy on soy-based infant formula (http://www.dh.gov.uk).

United States Food and Drug Administration. (1999). *Food labelling: Claims; soy protein and coronary disease; final rule* (Reference Federal Register 64 FR 57699). United States. FDA.

The Weston A Price Foundation website documents international health alerts on soy-based infant formula (http://www.westornaprice.org)

Whitehouse, D. (2007, July 23). Science reporting's dark secret. *The Independent.* Retrieved July 7, 2011, from http://www.independent.co.uk/news/media/science-reporting-dark-secret-458300.html?service=Print

The Whole Soy Story website provided information about international health alerts on soy formula (http:///www.wholesoystory.com).

Woodhams, D. (1997, March 6). Research ethics. *The Daily News,* p.6.

World Health Organisation. (1995). *Comments on the safety of soy-based products* (NUT-B13/180/1). Dr G. Clugston.

Workman, D. (2007, September 17). *Top soybean countries.* Retrieved March 7, 2011, from http://www.suite101.com/content /top-soybean-countries-a31383?tample=article_print.cfm

Interviews

J. Carey (September 2, 2011) said Food Standards Australia New Zealand (FSANZ) has a rigorous evidenced based process for assessing the safety of infant formula products.

J. Carey (August 29, 2011) said she couldn't send a statement yet since it has not been signed off and other priorities have taken over.

J. Carey (August 9, 2011) said the Infant Nutrition Council would develop a position statement about soy-based infant formulas signed off by the members.

G. Csaba (Letter to New Zealand's Ministry of Health released under the Official Information Act, January 30, 1095) expressed his fears in regards to the chimerical components found in soybean.

K. Daniel (May 31, 2011) stressed babies fed soy-based infant formula are put at risk because they are at a key developmental stage and FDA scientists have been very clear about it.

S. Fallon (August 25, 2011) said regulatory bodies in the US silent because of the power of the soy and formula industries.

M. Fitzpatrick (April 11, 2011) stressed that the Precautionary Principle should be applied in relation to soy-based formula and parents have the right to know it contains isoflavones.

M. Fitzpatrick (April 18, 2011) discussed studies and historical use of soy-based formula in Asia and around the world.

M. Fitzpatrick (May 2, 2011) discussed soy studies.

W. Gryson (letter to Dr Fitzpatrick, October 4, 1995) Dr Fitzpatrick is told by his former employer to cease all communication with the media.

C. Guy (May 15, 2011) highlighted problems for journalists writing about soy-based formula.

R. Hume (Letter to New Zealand's Ministry of Health released under the Official Information Act, January 25, 1995) stressed that in studies similar components to those found in soy have been linked to health problems in humans.

S. Kedgley (April 12, 2011) stressed most parents are completely oblivious to the potential risks associated with soy-based formula and the FSANZ has not taken the Precautionary Approach.

R. Newbold (July 28, 2011) said that studies conducted show that soy phytoestrogens can affect the reproductive system.

D. Sheehan., & D. Doerge. (Letter in reference to Docket#98P-0683; food labelling claims; soy protein and coronary heart disease) the two doctors oppose this health claim because there is abundant evidence that some of the isoflavones found in soy demonstrate toxicity.

J. Sinclair (July 4, 2011) said there is no data that says that soy is definitely harmful.

K. Swallow (August 8, 2011) said she has sent questions to the Pfizer Nutrition BU HQ in New York.

P. Tuohy (August 5, 2011) Ministry of Health position on soy-based infant formula and relevant discussion.

J. Wagstaff (letter to New Zealand's Ministry of Health released under the Official Information Act, January 27, 1995) providing requested by the Ministry information about the possible soy phytoestrogens toxicity.

R. Wiles (June 13, 2011) said he is aware of the potential problems associated with soy-based infant formula and would discuss them with his patients.

D. Woodhams (May 6, 2011) stressed that more needs to be done to protect babies and highlighted studies on soy.