



## **The Extent of Lactose Intolerance May Be Overstated, According to New Clinical Study**

***Results of a human clinical trial show that A1 protein in cows' milk  
may trigger symptoms of lactose intolerance.  
a2 Milk™, naturally free from A1 protein, potential solution for millions.***

### **Beijing - April 20, 2016 - Highlights**

- China chosen for clinical research because ~90% of the population<sup>i</sup> (amongst highest levels globally) reports lactose intolerance
- First human study-based research testing the effects of the A1 versus A2 protein types<sup>ii</sup> on participants with approximately half clinically diagnosed with lactase deficiency/lactose intolerance<sup>iii</sup>
- Conventional cows' milk (containing A1 protein type) caused significantly higher gastrointestinal inflammation, stool transit delays, and elevated blood markers for inflammation and immune response compared to a2 Milk™
- Research demonstrated that digestion issues disappeared when participants in the study consumed a2 Milk™
- a2 Milk™ drinkers also had faster response and lower error rates in cognitive function tests compared to conventional milk drinkers
- Both the study's design and its findings were endorsed by the Chinese Nutrition Society as communicated at an earlier meeting today by its Chairman Yang Yuexin, Chinese Centre for Disease Control and Prevention researcher
- The findings of this study have prompted new human clinical studies to commence across a number of markets including Australia, New Zealand, USA, UK and further expanded studies in China
- These results further enhance the commercial opportunity for The a2 Milk Company to welcome more people to dairy within China and other markets with high levels of reported milk intolerance

According to new clinical research conducted in China, lactose intolerance may be a myth for many, with symptoms resulting from drinking milk more likely an inflammatory response to the A1 protein found in conventional cows' milk.

Published in the respected UK based *Nutrition Journal*, the study led by Professor Sun Jianqin from Huadong Hospital, an affiliate of the renowned Fudan University in Shanghai, compared the impact of people drinking conventional cows' milk – milk with the A1 protein – to that of a2 Milk™.



According to contributing author, Associate Professor Xia, Gastroenterologist at the Shanghai Jiaotong University School of Medicine, and Adjunct Associate Professor at Johns Hopkins University School of Medicine in the USA: “These are significant findings for those who believe they suffer from lactose intolerance. The research suggests milk that only contains the A2 type protein (A2 beta-casein) has a natural affinity with the human body and digestion. Gut inflammation caused by the A1 type protein can be avoided by consuming milk products with only the A2 type protein. With so many people believing they are lactose intolerant, both in China and around the world, the findings are truly noteworthy.”

Professor Alex Richardson, Senior Research Fellow at the University of Oxford, also attended the launch and says: “This study has challenged the existing thoughts of the cause of post dairy digestive discomfort. Due to people’s misunderstanding of lactose intolerance, this research will change the way the public intake milk and even change people’s way of living.”

Originally, all cows produced only milk containing the A2 type of beta-casein protein; however, after domestication, another beta casein milk protein type – A1 protein – appeared in European herds, spreading along with human migration and modern farming. The A1 protein type is contained in most of the cows’ milk consumed in the world today.

a2 Milk™ is from cows specially selected because they produce milk containing *only* the A2 protein type, containing no A1 protein, as it was in the beginning.

A 2009 study published in USA based *Nutrition Today* found approximately 1-in-4 Americans (significantly higher proportions within Asian, African American and Hispanic populations) experience digestive issues when consuming conventional cows’ milk, with the majority associating these symptoms incorrectly with lactose intolerance. This new China based research supports these findings, showing people are more likely to enjoy real and natural milk free from A1 protein, without the need to resort to processed alternatives, such as lactose-free milks, or artificial plant-based drinks.

This Chinese research is the first human-based research testing the effects of the A1 versus A2 protein types on participants with half clinically confirmed as having issues with lactose digestion. The trial found a2 Milk™ caused no gastrointestinal disturbance in any study participants, including those confirmed to have issues digesting lactose.

Those participants in the study who consumed conventional cows’ milk (containing A1 protein) experienced elevated gastro-intestinal inflammation, stool transit delays, and elevated markers for inflammation and immune response as compared to consuming a2 Milk™.

Geoffrey Babidge, Managing Director and CEO of The a2 Milk Company Limited, speaking about the new study says: “Lactose usually takes the blame for the millions of people worldwide who have digestive issues with conventional cows’ milk, leading to them giving up on milk altogether. It is more likely that an inflammatory response to the A1 protein is the cause of their discomfort. This research is significant for the majority of people who have avoided milk for so long and blamed lactose intolerance as being the issue. For many people, they can now enjoy the nutritional benefits of a2 Milk™ based products with confidence.”



## About the trial

The trial recruited 45 healthy participants in Shanghai, China, with a history of self-reported milk intolerance into a double-blinded, randomized, 8-week crossover study. Participants were split randomly into two groups who abstained from all dairy products for the initial two weeks. For the following two weeks, participants consumed either conventional cows' milk (A1 protein-containing) or a2 Milk™. This was followed by crossing over the diet with two weeks of consuming a2 Milk™ or conventional milk respectively. 23 of the 45 were clinically diagnosed as lactase deficient, with the remaining participants claiming a digestive intolerance to dairy. Both researchers and participants were blinded to the milk they were drinking at all phases of the trial.

## About The a2 Milk Company

- The a2 Milk Company produces a portfolio of premium dairy and infant formula products all naturally free from the A1 protein, supported by an integrated portfolio of intellectual property, and a comprehensive body of scientific evidence
- The a2 Milk Company believes all people should enjoy the benefits of fresh and natural dairy products, and is pioneering a natural alternative for those who have a sensitivity to conventional cows' milk
- Founded in New Zealand, The a2 Milk Company is most established in Australia where the company is experiencing success with close to 10% market share of the total fresh milk grocery market<sup>iv</sup>, and significant and growing infant formula business in supermarkets and pharmacies
- The a2 Milk Company has established operations in Australia, New Zealand, China, UK and USA
- For more information go to [www.thea2milkcompany.com](http://www.thea2milkcompany.com)

### For more information contact:

**Australia: Rick Willis**  
[rick@networkfour.com.au](mailto:rick@networkfour.com.au)  
+61 (0)411 839 344

**New Zealand: Barry Akers**  
[akers@senescallakers.co.nz](mailto:akers@senescallakers.co.nz)  
+64 (0)21 571 234

---

<sup>i</sup> Source: New Scientist, "Everything you need to know about lactose intolerance", July 2015

<sup>ii</sup> A1 and A2 protein refers to A1 and A2 beta casein protein types

<sup>iii</sup> 23 of 45 study participants demonstrated lactase deficiency by urinary galactose (U-Gal) test with corresponding symptoms of lactose intolerance measured

<sup>iv</sup> Aztec Market share (value) 12 months period ending December 20, 2015

