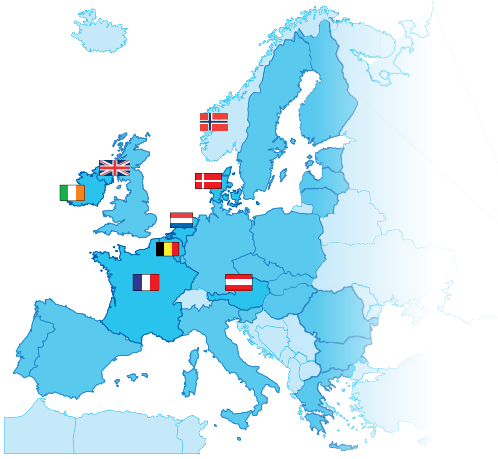
Milk, nutritious by nature
Symposia September 2014
Belfast, Dublin, Paris



Exploring the health benefits of the milk matrix

These symposia are organized by the European Milk Forum in cooperation with:

More information at
www.dairycouncil.co.uk

More information at
www.ndc.ie and www.indi.ie

More information at
www.maison-du-lait.com/fr

www.milknutritiousbynature.eu
info@milkforum.org

About the European Milk Forum (EMF)
Created in 2011, the European Milk Forum is the first pan-European non-profit organisation developing information and promotion campaigns on milk and dairy. “Milk, Nutritious by Nature” is a science-based campaign aimed at creating awareness of the nutrient richness of milk and dairy and at underlining milk and dairy’s contribution to a healthy and balanced diet. The campaign is currently running in Austria, Belgium, Denmark, France, Ireland, Northern Ireland, Norway and the Netherlands.
Website: www.milknutritiousbynature.eu

Milk, nutritious by nature
Symposia September 2014
Belfast, Dublin, Paris

Milk, nutritious by nature
Symposia September 2014

Exploring the health benefits of the milk matrix

These symposia are organized by European Milk Forum

Belfast	Dublin	Paris
15 September 2014,	16 September 2014,	17th September,
12:15pm to 3:30pm	6pm to 8:30pm	4.30 pm to 7pm

The symposia will cover 3 topics:

- **Milk nutritious by nature: From milk matrix to health benefits: an overview**
  by Dr. Jean-Michel Lecerf, MD, at Institute Pasteur in Lille, FR
- **Dairy and weight management: a review of the evidence**
  by Prof. Arne Astrup, University of Copenhagen, DK
- **Cardio-metabolic health: what's the role of dairy?**
  by Prof. Ian Givens, University of Reading, UK

About the European Milk Forum (EMF)
Created in 2011, the European Milk Forum is the first pan-European non-profit organisation developing information and promotion campaigns on milk and dairy. "Milk, Nutritious by Nature" is a science-based campaign aimed at creating awareness of the nutrient richness of milk and dairy and at underlining milk and dairy's contribution to a healthy and balanced diet. The campaign is currently running in Austria, Belgium, Denmark, France, Ireland, Northern Ireland, Norway and the Netherlands.
Website: www.milknutritiousbynature.eu

Milk nutritious by nature

Monday 15th September
The MAC, Belfast

Exploring the health benefits of the milk matrix

A symposium from the European Milk Forum in conjunction with the Dairy Council for Northern Ireland

Programme | Belfast

12.15 Arrival & buffet lunch

1.00 Chairperson's introduction
Dr. Michelle McKinley, Queen's University Belfast

1.10 From milk matrix to health benefits: an overview
Dr. Jean-Michel Lecerf, Institut Pasteur de Lille, France

1.45 Cardio-metabolic health: what's the role of dairy?
Prof. Ian Givens, University of Reading, UK

2.20 Tea & coffee

2.40 Dairy and weight management: a review of the evidence
Prof. Arne Astrup, University of Copenhagen, Denmark

3.15 Panel discussion

3.30 Close

EMF European Milk Forum

About the European Milk Forum (EMF)
Created in 2011, the European Milk Forum is the first pan-European non-profit organisation developing information and promotion campaigns on milk and dairy. "Milk, Nutritious by Nature" is a science-based campaign aimed at creating awareness of the nutrient richness of milk and dairy and at underlining milk and dairy's contribution to a healthy and balanced diet. The campaign is currently running in Austria, Belgium, Denmark, France, Ireland, Northern Ireland, Norway and the Netherlands.
Website: www.milknutritiousbynature.eu

From milk matrix to health benefits: an overview

Dr. Jean Michel Lecerf, MD, PhD, Head of Department of Nutrition, Institut Pasteur de Lille, France

Nutrition science has focused on food nutrients for decades. However, we eat foods, not nutrients and it becomes more and more evident that the effects of whole foods are greater or different from that of the sum of their nutrients, as suggested by discrepancies between epidemiological data and results of clinical trials of dietary supplements. This reflects the food matrix effect, i.e. the fact that beyond nutrients, a food, especially an unrefined food, is a combination of hundreds of components in a particular arrangement and interaction working in concert.

Milk and dairy products are good examples of the complexity of foods and of the food matrix effect. Milk provides almost all nutrients and micronutrients essential for life; it is the natural food with the largest nutrient diversity among all available foods for human nutrition: lactose, high quality proteins, a great diversity of fatty acids with over 400 different kinds (some of them being very specific) ; the milk micronutrient content is also very vast, not only calcium, but also phosphorus, selenium, iodine, magnesium, vitamins B1, B2, B3, B5, B6, B12, D and A.

The positive interaction between some nutrients or components explains, at least in part, the major health effects of dairy products. For example calcium, phosphorus , vitamin D and protein positively interact with several physiological mechanisms involved in bone growth, maintenance of bone health and the prevention of osteoporosis. There is also an important interaction between dairy protein, vitamin D and mechanical loading on skeletal muscle mass and function, thus contributing to the prevention of sarcopenia. Similarly the blood pressure lowering effect of milk may be the result of interactions between calcium, potassium, phosphorus and bioactive dairy peptides. The majority of epidemiological studies have shown no adverse effect of dairy foods on cardiovascular health, and in some cases a protective effect, irrespective of fat content. Once again, the explanation for this may lie in the complex composition of dairy foods within a specific matrix.

Thus the food matrix modulates the action of the food components on human biological systems leading to specific health effects. This concept of the food matrix has many implications for defining a healthy individual diet, for making dietary policy, and for the future direction of nutrition research.

From milk matrix to health benefits: an overview

Dr. Jean Michel Lecerf, MD, PhD, Head of Department of Nutrition, Institut Pasteur de Lille, France

References

1. Jacobs DR Jr, Gross MD and Tapsell LC. Food synergy: an operational concept for understanding nutrition. Am J Clin Nutr 2009;89(suppl):1543S–8S.

2. de Oliveira Otto MC, Mozaffarian D, Kromhout D, Bertoni AG, Sibley CT, Jacobs DR Jr, Nettleton JA. Dietary intake of saturated fat by food source and incident cardiovascular disease: the Multi-Ethnic Study of Atherosclerosis. Am J Clin Nutr. 2012;96(2):397-404. doi: 10.3945/ajcn.112.037770

3. Jacobs DR Jr and Tapsell LC. Food synergy: the key to a healthy diet. Proc Nutr Soc. 2013 May;72(2):200-6. doi: 10.1017/S0029665112003011

4. Bonjour JP, Kraenzlin M, Levasseur R, Warren M, Whiting S. zouden aDairy in Adulthood : From Foods to Nutrient Interactions on Bone and Skeletal Muscle Health. J Am Coll Nutr. 2013;32(4):251-63. doi: 10.1080/07315724.2013.816604

Dairy and weight management: a review of the evidence

Prof. Arne Astrup, MD, DMSc, Head of Department of Nutrition, Exercise and Sports, Faculty of Science, University of Copenhagen, Denmark

Accumulating evidence from observational studies indicates an inverse association between dairy and body weight and body fat mass. Some randomised controlled trails (RCT) have been reported, and meta-analyses of observational studies support the role of dairy for weight control, particularly during energy restriction. However, though several of the reported RCT's show beneficial effects of dairy for body weight the mechanisms by which dairy influences energy balance are not entirely clear. However, dairy protein and calcium may play certain roles.

In the Diogenes trial, we have shown that a slight increase in total protein (~25 % of energy), a corresponding reduction in total carbohydrate, and a relative increase in low-glycemic index carbohydrates, promotes weight control both in adults and in obese children. Dairy protein has a very high quality in terms of amino acid composition, and its effects on satiety and muscle anabolism are similar or better than those from other sources. Protein has an important role for weight control, and in combination with calcium and vitamin D there is a role for a specific reduction in abdominal obesity and metabolic syndrome. In Diogenes the diet was also found to have a positive effect on blood pressure, blood lipids, and inflammatory markers.

Increased dietary calcium intake has been proposed to affect both sides of the energy equation, i.e. both energy intake and energy utilization, at least in subjects with low habitual intake. It has been shown that increased dairy calcium intake produces a decrease in fat digestibility, presumably due to formation of insoluble calcium-fatty acid soaps and binding of bile acids. Based on a meta-analysis we have estimated that an increase in dairy calcium intake of ~1200 mg/day produces an increased fecal fat excretion of 5.2 g/day. Finally it has been suggested that low dietary calcium intake may affect appetite regulation and lead to an increased food intake, and this effect has recently been substantiated by a meta-analysis.

In conclusion, a high intake dairy is a natural part of a nutrient dense diet that provides benefits for weight control, and the prevention of type 2 diabetes and cardiovascular disease.

Dairy and weight management: a review of the evidence

Prof. Arne Astrup, MD, DMSc, Head of Department of Nutrition, Exercise and Sports, Faculty of Science, University of Copenhagen, Denmark

References

1. Larsen TM, Dalskov S, van Baak M, Jebb S, Papadaki A, Pfeiffer AFH, Martinez JA, Handjieva-Darlenska T, Kunešová M, Pihlsgård M, Stender S, Holst C, Saris WHM, Astrup A for the Diet, Obesity, and Genes (Diogenes) Project. Diets with high or low protein content and glycemic index for weight-loss maintenance. N Engl J Med 2010;362:2102-13

2. Astrup A, Dyerberg J, Elwood P, Hermansen K, Hu FB, Jakobsen MU, Kok FJ, Krauss RM, Lecerf JM, LeGrand P, Nestel P, Risérus U, Sanders T, Sinclair A, Stender S, Tholstrup T, Willett WC. The role of reducing intakes of saturated fat in the prevention of cardiovascular disease: where does the evidence stand in 2010? Am J Clin Nutr 2011;93:684-688.

3. Casazza K, Fontaine KR, Astrup A, Birch LL, Brown AW, Bohan Brown MM, Durant N, Dutton G, Foster EM, Heymsfield SB, McIver K, Mehta T, Menachemi N, Newby PK, Pate R, Rolls BJ, Sen B, Smith DL Jr, Thomas DM, Allison DB. Myths, presumptions, and facts about obesity. N Engl J Med. 2013 Jan 31;368(5):446-54.

4. Engberink MF, Geleijnse JM, Bakker SJ, Larsen TM, Handjieva-Darlesnka T, Kafatos A, Martinez JA, Pfeiffer AF, Kunešová M, Jebb SA, Holst C, Astrup A, Saris WH, Brink EJ, van Baak MA. Effect of a high-protein diet on maintenance of blood pressure levels achieved after initial weight loss: the DiOGenes randomized study. J Hum Hypertens. 2014 Apr 24. doi: 10.1038/jhh.2014.30.

5. Astrup A. Yogurt and dairy product consumption to prevent cardiometabolic diseases: epidemiologic and experimental studies. Am J Clin Nutr. 2014 May;99(5Suppl):1235S-42S.

6. Aller EE, Larsen TM, Claus H, Lindroos AK, Kafatos A, Pfeiffer A, Martinez JA, Handjieva-Darlenska T, Kunesova M, Stender S, Saris WH, Astrup A, van Baak MA. Weight loss maintenance in overweight subjects on ad libitum diets with high or low protein content and glycemic index: the DIOGENES trial 12-month results. Int J Obes (Lond). 2014 Mar 28. doi: 10.1038/ijo.2014.52

7. Soerensen KV, Thorning TK, Astrup A, Kristensen M, Lorenzen JK. Effect of dairy calcium from cheese and milk on fecal fat excretion, blood lipids, and appetite in young men. Am J Clin Nutr. 2014 May;99(5):984-91.

Cardio-metabolic health: what's the role of dairy?

Prof. Ian Givens, Professor of Food Chain Nutrition,
Food Production and Quality Division & Centre for Food Security,
Faculty of Life Sciences, University of Reading UK

Public health background

The rapidly increasing burden of obesity, increasing age of populations and the need to increase world food production by 50% by 2030 to meet the increasing demands whilst minimising the effect on the environment will all shape future food policy. These trends will also increase the risk of cardio-metabolic disease (CMD) which means that diet, a key moderator of chronic disease risk, will play an increasingly important role. The marked rise in obesity and it's often progression into type 2 diabetes (T2DM), non-alcoholic fatty liver disease (NAFLD) and cardiovascular diseases (CVD) are of particular concern. These conditions are often collectively referred to as the Cardiometabolic Syndrome (or Metabolic Syndrome) and it is of particular concern as many of the effects are now being reported in younger people (Nugent, 2003).

Dairy products and cardio-metabolic disease

Most conclusions about the risk of CMD resulting from consumption of dairy products have been based on their saturated fatty acid (SFA)-rich fat or interpretation of risk makers for disease, notably blood cholesterol. Whilst some prospective studies have shown increased blood cholesterol in high dairy consumers, highly controlled intervention studies show the response in cholesterol to be inconsistent. For e.g. a study with healthy men, fed 20% of dietary energy as butter for 21 days resulted in no significant changes in the blood lipids (Poppitt et al., 2002). There is also evidence that fermented milk products are often hypocholesterolaemic relative to non-fermented equivalents (Biong et al., 2004). A number of studies comparing consumption of equal amounts of dairy fat from cheese or butter have shown fat from cheese to give lower total and LDL-cholesterol concentrations than from butter (e.g. Hjerpsted et al., 2011). This suggests that food source can moderate the effects of SFA on CMD risk as also shown by de Oliveira Otto et al. (2012) who reported that dairy SFA was associated with lower CVD risk whilst SFA from meat increased CVD risk. Hypertension is a leading risk factor for CVD/CMD. Many studies show a reducing effect of milk and dairy products on blood pressure (e.g. Griffith et al., 1999; Livingstone et al., 2013) and the effect of these foods on new, more holistic markers of vascular health (e.g. vascular stiffness) is becoming evident. Both cross-sectional (Crichton et al., 2012) and longitudinal (Livingstone et al., 2013) cohort studies have shown significant negative relationships between dairy product intake and measures of arterial stiffness. Studies are limited in number, but they suggest that milk proteins probably play a key part in reducing both blood pressure and arterial stiffness. Whilst prospective cohort studies do have limitations, for now they provide the best evidence on dairy food consumption and CMD as they use disease events and death as outcomes. Most reliable conclusions are those from meta-analysis of many studies. To date, the largest meta-analysis for CMD is that of Elwood et al. (2010) based on 17 studies of adequate quality for inclusion. These comprised 4.3 million person-years, with 16,212 CVD events or deaths. An estimate of the relative risk (RR) of CVD and T2DM was made for subjects with the highest milk/dairy consumption compared with the lowest consumption. Overall, the results showed a reduction in risk in the subjects with the highest

Cardio-metabolic health: what's the role of dairy?

Prof. Ian Givens, Professor of Food Chain Nutrition,
Food Production and Quality Division & Centre for Food Security,
Faculty of Life Sciences, University of Reading UK

dairy consumption relative to those with the lowest intake, i.e. 0.87 (95 % confidence interval (CI) 0.77, 0.98) for all-cause deaths, 0.92 (95 % CI 0.80, 0.99) for ischaemic heart disease, 0.79 (95 % CI 0.68, 0.91) for stroke and 0.85 (95 % CI 0.75, 0.96) for T2DM. The dose-response meta-analysis of Soedamah-Muthu et al. (2011) was also suggestive of a negative relationship between milk intake and CVD risk. There is little intervention evidence in relation to dairy products and T2DM and equally little information on the mechanisms involved, although Mozaffarian et al. (2013) suggest the negative association seen between plasma trans-palmitoleic acid (of dairy origin) concentration and diabetes as a possible mechanism of action. More studies are needed to confirm this.

Conclusions

Milk and milk products have had a very mixed press in recent times from being blamed for many disorders to more measured considerations of their role in a balanced diet. Whilst most people understand they are very important sources of nutrients such as calcium, iodine and vitamin B12, there is more uncertainty in the public's mind about whether or not these foods contribute to increased risk of CMD and indeed other chronic diseases. The evidence from long term cohort studies that high milk consumption does not increase CMD risk and indeed may provide benefit is now pretty unequivocal, although the specific effects of butter and cheese as well as benefits, if any, of fat-reduced milk and saturated fat reduced milk are less certain. In the future it is likely that the importance of overall dietary pattern in relation to CMD risk will increase as highlighted by Bongard et al. (2012).

References

1. Biong AS, Muller H, Seljeflot I, Veierod MB, Pedersen JI (2004). A comparison of the effects of cheese and butter on serum lipids, haemostatic variables and homocysteine. Br J Nutr, 92:791–7.

2. Bongard V, Arveiler D, Dallongeville J, Ruidavets JB, Simon C, Cottel D, Bingham A and Ferrieres J (2012). Association of dietary patterns with 14 year all and cause-specific mortality. Eur Heart J, 33(S1): 609-610.

3. Crichton GE, Elias MF, Dore GA, Abhayaratna WP and Robbins MA (2012). Relations between dairy food intake and arterial stiffness. Hypertens, 59: 1044-1051.

4. de Oliveira Otto MC, Mozaffarian D, Kromhout D, Bertoni AG, Sibley CT, Jacobs DR Jr, and Nettleton JA (2012). Dietary intake of saturated fat by food source and incident cardiovascular disease: the Multi-Ethnic Study of Atherosclerosis. Am J Clin Nutr, 96:397–404.

5. Elwood PC, Pickering JE, Givens DI and Gallacher J (2010). The consumption of milk and dairy foods and the incidence of vascular disease and diabetes: An overview of the evidence. Lipids, 45: 925-939.

Cardio-metabolic health: what's the role of dairy?

Prof. Ian Givens, Professor of Food Chain Nutrition,
Food Production and Quality Division & Centre for Food Security,
Faculty of Life Sciences, University of Reading UK

6. Griffith LE, Guyatt GH, Cook RJ, Bucher HC and Cook DJ (1999). The influence of dietary and non-dietary calcium supplementation on blood pressure: an update meta-analysis of randomised controlled trials. Am. J. Hypertens, 12: 84-92.

7. Hjerpsted J, Leedo E and Tholstrup T (2011). Cheese intake in large amounts lowers LDL-cholesterol concentrations compared with butter intake of equal fat content. Am J Clin Nutr, 94:1479–84.

8. Livingstone KM, Lovegrove JA, Cockcroft JR, Elwood PC, Pickering J E and Givens DI (2013). Does dairy food intake predict arterial stiffness and blood pressure in men?: Evidence from the Caerphilly Prospective Study. Hypertens, 61: 42-47.

9. Mozaffarian D, de Oliveira Otto MC, Lemaitre RN, Fretts AM, Hotamisligil G, Tsai MY, Siscovick DS and Nettleton JA (2013). trans-Palmitoleic acid, other dairy fat biomarkers, and incident diabetes: the Multi-Ethnic Study of Atherosclerosis (MESA). Am J Clin Nutr, 27:854–61.

10. Nugent AP (2003). The Metabolic Syndrome. Nutrition Bulletin, 29: 36-43.

11. Poppitt SD, Keogh GF, Mulvey TB, McArdle BH, MacGibbon AK and Cooper GJ (2002). Lipid-lowering effects of a modified butter-fat: a controlled intervention trial in healthy men. Eur J Clin Nutr, 56: 64-71.

12. Soedamah-Muthu SS, Ding EL, Al-Delaimy WK, Hu FB, Engberink MF, Willett WC and Geleijnse JM (2011). Milk and dairy consumption and incidence of cardiovascular diseases and all-cause mortality: dose-response meta-analysis of prospective cohort studies. Am J Clin Nutr, 9: 3158-3171.

Biographies

From milk matrix to health benefits: an overview
Dr. Jean-Michel Lecerf - France

Jean-Michel Lecerf is a physician, specialized in endocrinology and metabolic diseases. He is the head of the Nutrition Department at the Pasteur Institute in Lille (France) and a consultant for the Lille hospital. He is also an expert for the French Agency for Food, Environmental and Occupational Health & Safety (ANSES) where he recently presided a group working in “The health risks related to dietary weight-loss practices”. He is a member of several scientific societies and the author of 350 scientific articles as well as about 10 books related to nutrition, diabetes, cholesterol and obesity.

Dairy and weight management: a review of the evidence
Prof. Arne Astrup - Denmark

Arne Astrup is Head of The Department of Nutrition, Exercise and Sports at The Faculty of Science, University of Copenhagen, Denmark. He is Director of the OPUS Research Centre 2009-14 funded by the Nordea Foundation (total grant of 15 mill. €).
Arne Astrup was created Knight of the Order of Dannebrog in 1999, and Knight of the First Order of Dannebrog in November 2012.
Astrup attained his medical degree from the University of Copenhagen in 1982 and a Doctorate in Medical Science in 1986. He was appointed Professor of Nutrition at the Research Department on Human Nutrition at the Royal Veterinary and Agricultural University, Denmark in 1990. His main areas of interest include the physiology and pathophysiology of energy and substrate metabolism, with special emphasis on the aetiology and treatment of obesity. Major research collaborations include participation in the EU multicenter studies EUROSTARCH, CARMEN, NUGENOB, DIABESITY, DIOGENES, EMOB, and HEALTHGRAIN. He is author/co-author of Over 510 peer-reviewed original, review, and editorial publications (citations-H-index: 66), and more than 950 other academic publications such as textbook chapters, scientific abstracts and letters. The great majority of these publications relate to nutrition, obesity and diseases relating to obesity, and several are published in the New England Journal of Medicine, The Lancet, and Nature. Thomson Reuters Science Index 2010: 5th for obesity publications.

Arne Astrup is currently Associate Editor of American Journal of Clinical Nutrition (2010-) and member of the Editorial Committee of Annual Reviews of Nutrition (2013-). He was founding Editor-in-Chief of Obesity Reviews in 1999-2010. He was President of The International Association for the Study of Obesity (IASO) 2006-2009 and Chairman 2009-2010. Academic honours include: Servier’s Award for Outstanding Obesity Research 1990; IASO André Mayer Award 1994;

Danone Chair in Nutrition 2002 at The University of Antwerp; LIFE Communication Prize 2007; International Association of Business Communicators' EME Excel Merit Award for Communication Leadership 2009; LIFE Innovations Award 2010; Nutrition & Santé Weight Management Award (France) 2010; Finnish Association of Internal Medicine Esko Nikkilä Prize 2012; American Society for Nutrition Robert H. Herman Award 2012; Danish Communication Association KomPris´12 to the OPUS Research Centre 2012. IASO Willendorf Award 2014.

Arne Astrup is currently consultant or member of advisory boards for a number companies, including: Arena Pharmaceuticals Inc., USA; Basic Research, USA; BioCare Copenhagen, DK; Dutch Beer Knowledge Institute, NL; Gelesis, USA; Gerson Lehrman Group, USA; Global Dairy Platform, USA; McCain Foods Ltd, USA; McDonald's, USA; Pathway Genomics Corporation, USA; S-Biotek, DK; Twinlab, USA; Vivus Inc., USA. He is recipient of honoraria as speaker for a wide range of Danish and international concerns. Arne Astrup is co-owner and member of the board of the consultancy company Dentacom Aps, Denmark and owns shares in Mobile Fitness A/S, Denmark. He holds rights to patents registered in collaboration with the University of Copenhagen.

For further information see the University website:
http://nexs.ku.dk/english/staff/?id=3865&vis=medarbejder

and in this transcript of an interview from July 2010:
http://www.sciencewatch.com/ana/st/obesity2/10julObes2Astr/

Cardio-metabolic health: what's the role of dairy?
Prof. Ian Givens - United Kingdom

Professor Ian Givens has background training in biochemistry and nutrition and is currently Professor of Food Chain Nutrition and Director of the Food Production and Quality Research Division in the Faculty of Life Sciences, University of Reading. His research interests focus on food chain nutrition with emphasis on the relationship between consumption of animal-derived foods across the key life stages, nutrient supply and chronic disease outcome with particular emphasis on vascular disease and milk proteins saturated, trans and n-3 fats. Current work focuses on lipids and proteins in milk and dairy products and their influence on cardiovascular disease. It also includes the use of animal nutrition to modify the lipid and vitamin D composition of these foods along with development of valid markers of chronic disease risk associated with consumption of normal and modified foods. Some recent publications include:

Livingstone, K. M., Givens, D. I., Jackson, K.G. and Lovegrove, J. A. (2014). Comparative effect of dairy fatty acids on

cell adhesion molecules, nitric oxide and relative gene expression in healthy and diabetic human aortic endothelial cells. Atherosclerosis, published online: 26-FEB-2014. DOI: 10.1016/j.atherosclerosis.2014.02.015

Livingstone, K.M., Givens, D.I., Cockcroft, J.R., Pickering, J.E. and Lovegrove, J.A. (2013) Is fatty acid intake a predictor of arterial stiffness and blood pressure in men? Evidence from the Caerphilly Prospective Study. Nutrition, Metabolism & Cardiovascular Diseases, 23: 1079-1085.

Livingstone, K.M., Lovegrove, J.A., Cockcroft, J.R., Pickering, J.E., Elwood, P.C. and Givens, D.I. (2013). Does dairy food intake predict arterial stiffness and blood pressure in men? Evidence from the Caerphilly Prospective Study. Hypertension, 61: 42-47.

Livingstone, K.M., Lovegrove, J.A. and Givens, D.I. (2012). The impact of substituting SFA in dairy products with MUFA or PUFA on CVD risk: evidence from human intervention studies. Nutrition Research Reviews, 25:193-206.

Givens, D. I ., Aikman, P. C., Gibson, T. M and Brown, R.H (2013) Proportions of A1, A2, B and C β-casein protein variants in retail milk in the UK. Food Chemistry, 139: 549-552.

Dougkas, A., Yaqoob, P., Givens, D.I., Reynolds, C.K. and Minihane, A.M. (2013). The impact of obesity-related single nucleotide polymorphisms on appetite and energy intake: a pilot study. British Journal of Nutrition, 110:1151-1156.