

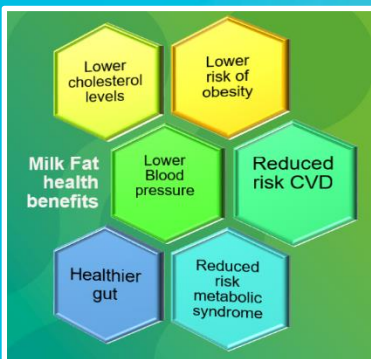


MAKING AN IMPACT

Human health advantages of pasture-derived milk fat products

By PhD student, Orla Skillington

Many people today believe that dairy fats are an “unhealthy” part of our daily diet. However, this belief is not supported by current scientific evidence. In fact, recent research suggests that dairy fat hosts a plethora of protective health benefits. For examples, whole-fat and fermented dairy products have been purported to elicit protective health effects in the first days of life – helping establish a healthy gut microbiota and immune system. Similar studies have shown that in later life, dairy products could reduce the risk of cardiovascular disease, obesity and various cancers.



Recent work has shown that dairy products, derived from a pasture-based feeding system, produce milks with higher nutritional status versus indoor TMR (total mixed rations) feeding systems – yielding more than a two-fold increase in total CLA (conjugated linoleic acid)

and omega 3 fatty acids with significantly lower levels of unfavourable omega 6 fatty acids.

Given the lower saturated fat content of pasture-derived products, the implications for human health are highly significant. As part of my work at VistaMilk I will be investigating the potential benefits of milkfat-derived products from pasture vs. indoor TMR feeding on human health. I will focus on the early-life gut microbiome and the effects these products have on metabolic syndrome, using an animal model of digestion.

The outcome of the project will be the identification of pasture-derived milkfat fractions of particular benefit to human health.

MEET THE RESEARCHER

Name: Samitha Somathilaka

Host: Walton Institute, WIT

Role: PhD Student

Education: I received my bachelor’s degree from the University of Ruhuna (Sri Lanka) and master’s degree in cybersecurity from the Sri Lanka Institute of Information Technology. Currently, I am a PhD student at Walton Institute since January 2020



Research at Vistamilk: My research targets the Molecular Communication of the human microbiome (HM). Through a computational systems biology approach, I have introduced a 2-layered architecture to the HM along with a simulator. Using them, I am currently investigating the gut microbiome to identify the causes of metabolic disorders and to suggest structural alterations with necessary genetic modifications to overcome them. I believe my approach will have a significant impact on discovering smarter diagnostics and effective treatments for disorders such as obesity and type-2 diabetes.

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PUBLICATIONS

[Herd solutions from genetic evaluations can be used as a tool to rescale the expected expression of genetic potential in cattle.](#)

David Kenny, Roy D. Sleator, Craig P. Murphy, Ross D. Evans, Donagh P. Berry

[Predicting cow milk quality traits from routinely available milk spectra using statistical machine learning methods](#)

M. Frizzarin, C. Gormley, D. P. Berry, T. B. Murphy, A. Casa, A. Lynch, and S. McParland

[Prediction of genetic merit for live weight and body condition score in dairy cows using routinely available linear type and carcass data](#)

D. P. Berry, R. D. Evans, and M. M. Kelleher

[Short communication: Differences in genetic merit for visually-assessed body condition score materialises as phenotypic differences in tactile-based body condition score in commercial dairy cows](#) D.P. Berry, M.M. Kelleher

FUNDING OPPORTUNITIES

Horizon Europe Work Programmes now published and calls open. First submission deadline delayed to October 2021. Get in touch with [Guillaume Le Palud](#) to discuss opportunities and support.

[SFI Industry RD&I Fellowship Programme](#). Up to €100k for academic researchers to work on a research project in industry worldwide, through a temporary placement with an industry partner. Deadline July 21st 2021. Call details [here](#).

[EJP SOIL](#) "Towards climate smart sustainable agricultural soils" first external call open to all Irish RPOs. Deadline September 7th 2021. Call topics and details [here](#).

[ERA-NETs FOSC and SUSFOOD2 joint call](#) on "innovative solutions for resilient, climate-smart and sustainable food systems". Topics on "Innovations to improve food systems sustainability, with a focus on increasing resource efficiency and reducing waste" and "Food Systems adaptation and resilience to system shocks". Full application August 16th 2021. Call details [here](#).

[NGI TruBlo Open Call](#) for small scale research projects on one of the 2 topics: Trust and reputation models on blockchains and Proof-of-validity and proof-of location. Deadline September 10th 202. More details [here](#).

[Marie Curie Actions](#) Fellowships and Doctoral Networks calls opened on June 22nd 2021. Deadline on October 12th 2021.

Events: Horizon Europe - Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment – Info Days for 2021 calls on 7-8th July. Details [here](#).

Horizon Europe - Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment - virtual brokerage event for 2021 calls on 9th July. This is the perfect event to find out about projects being developed and look for partners. Details and registration [here](#).

Please take a couple of minutes to complete "National survey on Covid-19 impact on researchers and academic, linked in the image below.

NATIONAL SURVEY ON COVID-19 IMPACT ON RESEARCHERS AND ACADEMICS

OTHER THINGS TO DO THIS MONTH

Tune in to see VistaMilk academic collaborator Prof. Eleni Mangina, UCD, talk about her work in artificial intelligence

Do you have a young scientist at home? Check out this virtual summer camp featuring VistaMilk Phd student at Tyndall, Ana Claudia Ferreira

Check out the "Everyday Nutrition" podcast featuring VistaMilk principal investigator Orla O'Sullivan