



HAL
open science

Functional Swiss-type cheeses promote beneficial effects on mice health and gut microbiome during inflammatory bowel disease

Houem Rabah, Rodrigo D Carvalho, Flávia Figueira Aburjaile, Fillipe Luiz Rosa Do Carmo, Ana Maria Caetano Faria, Emiliano Rosa Oliveira, Gilles Garric, Marielle Harel-Oger, Eric Guédon, Yves Le Loir, et al.

► To cite this version:

Houem Rabah, Rodrigo D Carvalho, Flávia Figueira Aburjaile, Fillipe Luiz Rosa Do Carmo, Ana Maria Caetano Faria, et al.. Functional Swiss-type cheeses promote beneficial effects on mice health and gut microbiome during inflammatory bowel disease. the 28th International ICFMH Conference FOOD MICRO 2024, International Committee on Food Microbiology and Hygiene (ICFMH), Jul 2024, Burgos, Spain. hal-04649138

HAL Id: hal-04649138

<https://hal.inrae.fr/hal-04649138>

Submitted on 16 Jul 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - NonCommercial - NoDerivatives 4.0 International License

INRAE

➤ Functional Swiss-type cheeses promote beneficial effects on mice health and gut microbiome during inflammatory bowel disease

Gwénaél JAN

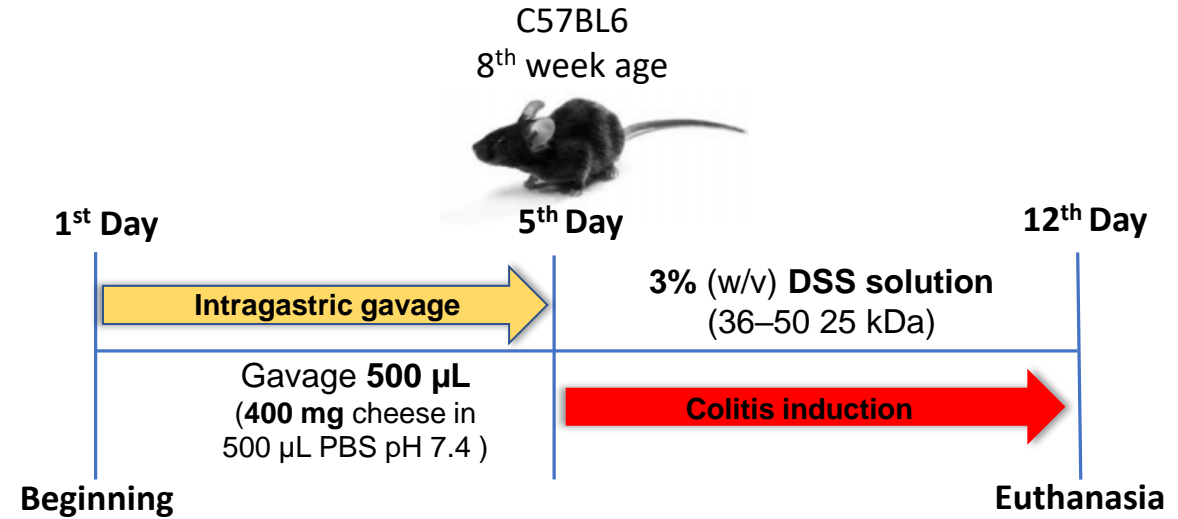
STLO, INRAE, Institut Agro, Science et Technologie du Lait et de l'Œuf, Rennes

gwenael.jan@inrae.fr

<https://www6.rennes.inrae.fr/stlo>



➤ A single-strain experimental cheese and an industrial Emmental cheese, both containing an anti-inflammatory strain of *Propionibacterium freudenreichii*



➤ Tested in a DSS-induced colitis mice model

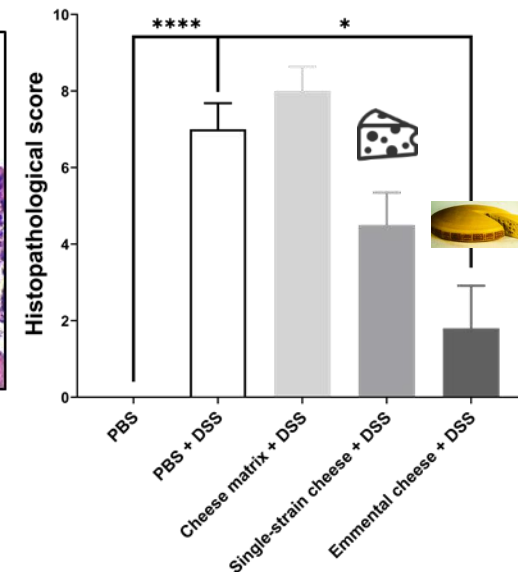
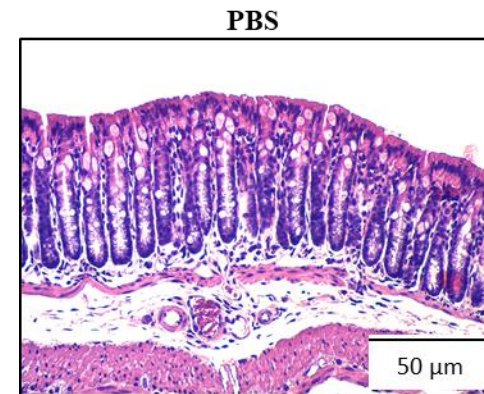
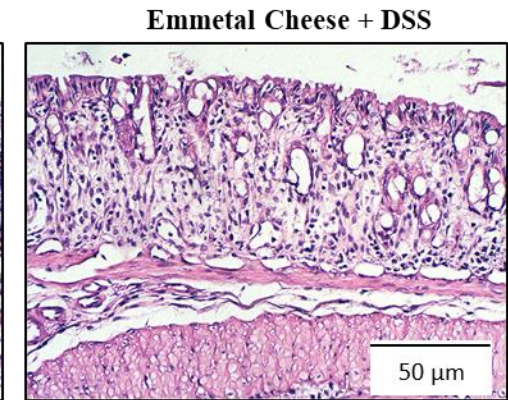
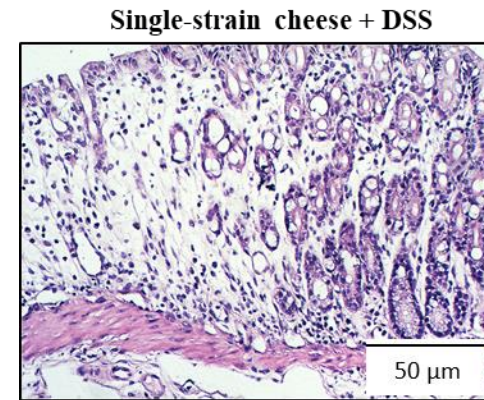
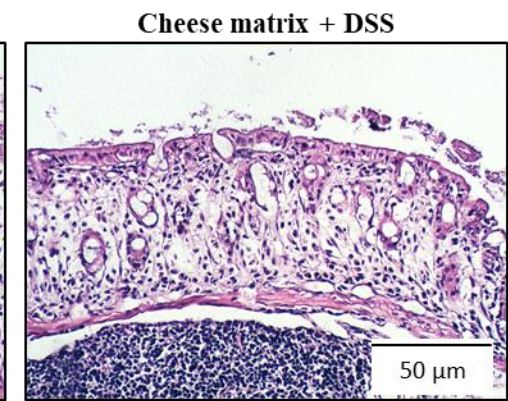
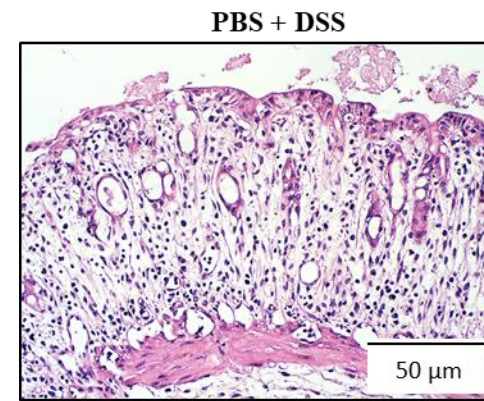


INRAE

Propionibacteria cheese, Inflammation & gut microbiota

FoodMicro 2024. G. Jan

➤ Cheese mitigates histopathological damages



INRAE

Propionibacteria cheese, Inflammation & gut

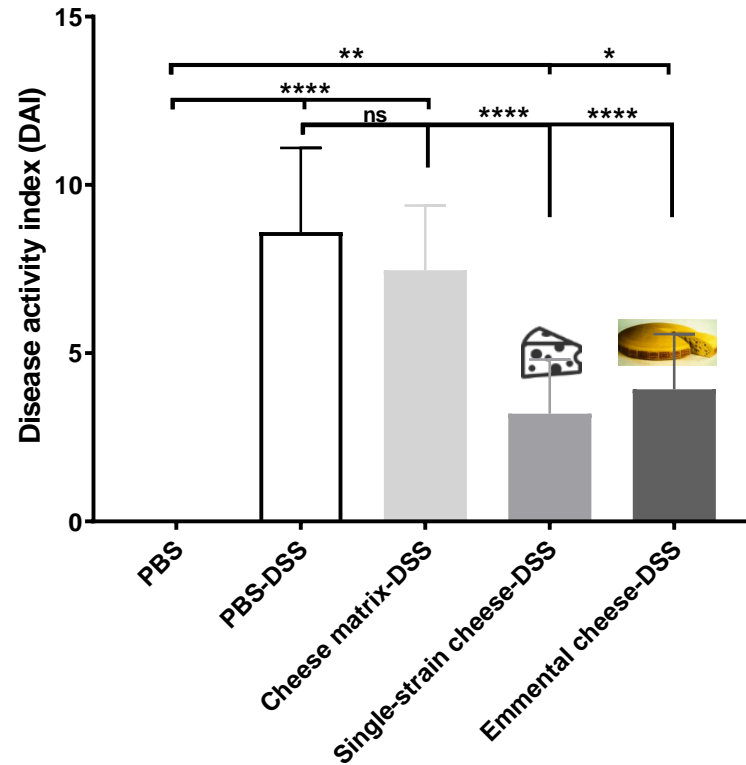
FoodMicro 2024. G. Jan



UFMG
UNIVERSIDADE FEDERAL DE MINAS GERAIS



➤ Cheese mitigates disease activity index



INRAE

Propionibacteria cheese, Inflammation & gut

FoodMicro 2024. G. Jan

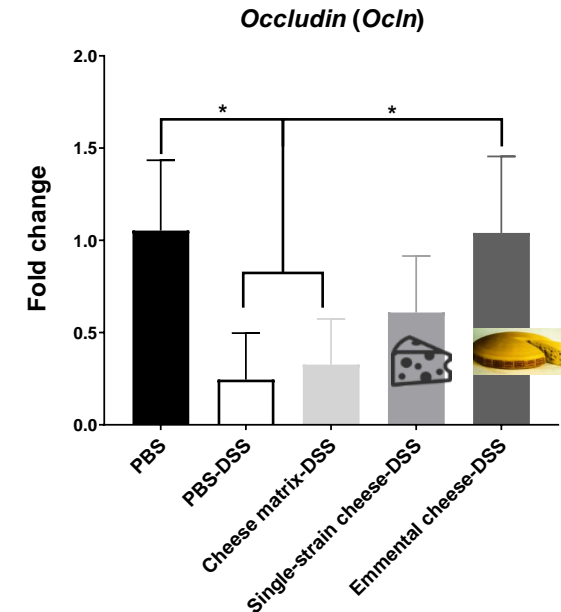
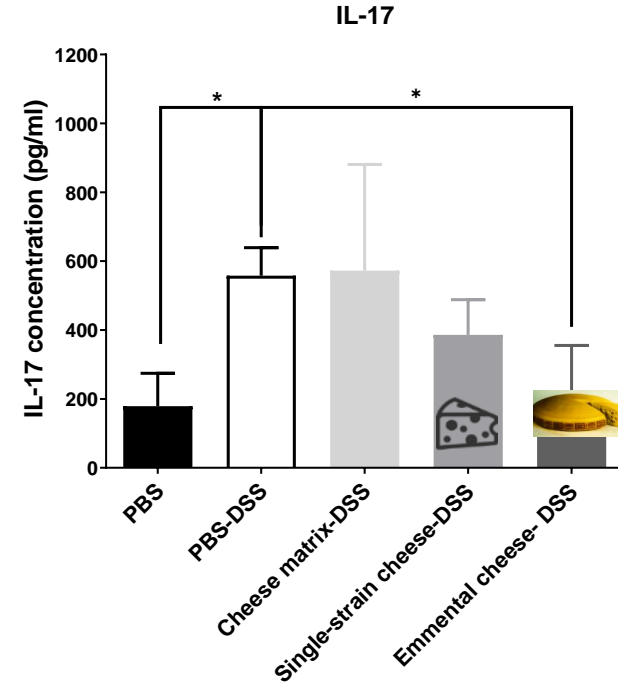
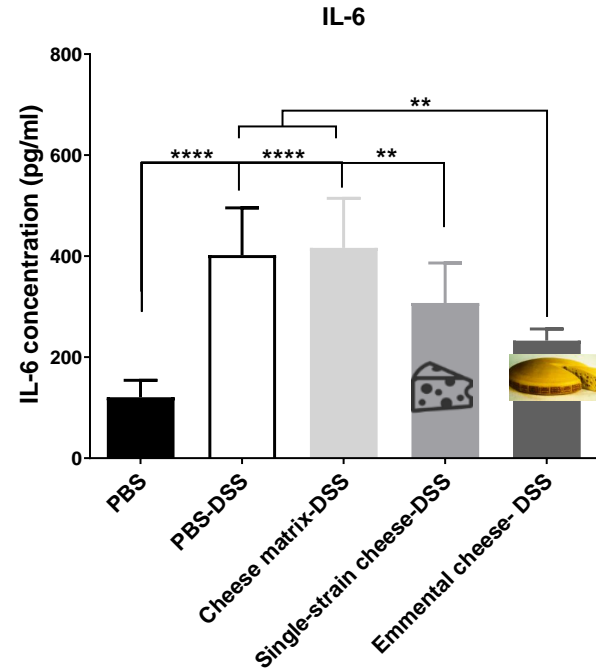
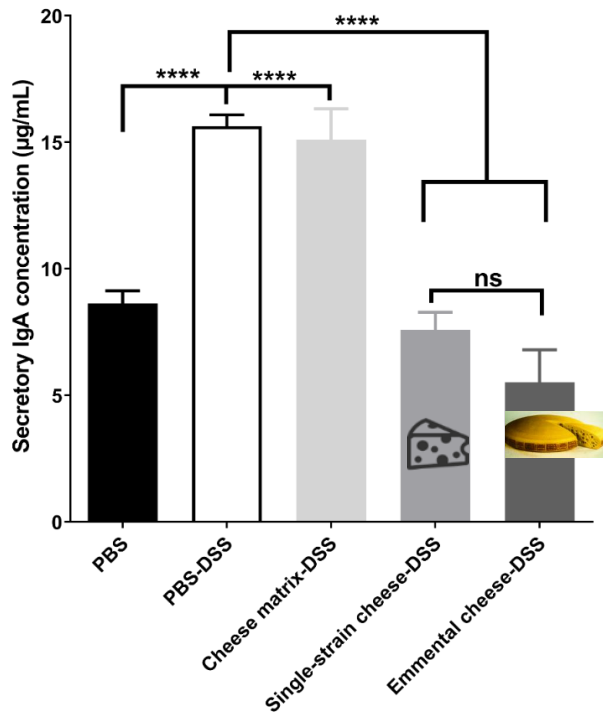


UFMG

UNIVERSIDADE FEDERAL DE MINAS GERAIS



➤ Cheese mitigates inflammation



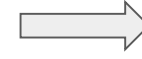
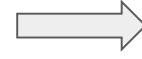
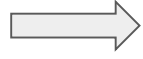
INRAE

Propionibacteria cheese, Inflammation & gut

FoodMicro 2024. G. Jan



➤ Cheese modulates the gut microbiota in healthy conditions

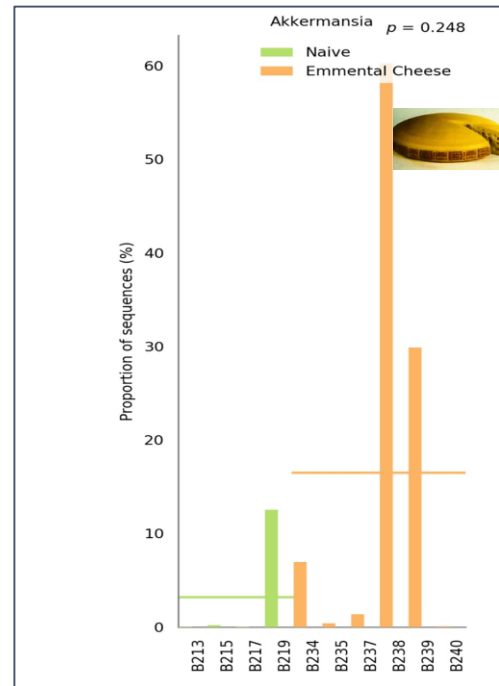
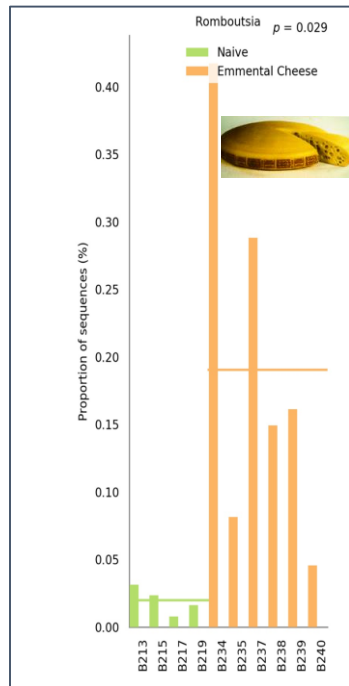


HiSeq 2500



Romboutsia

Akkermansia

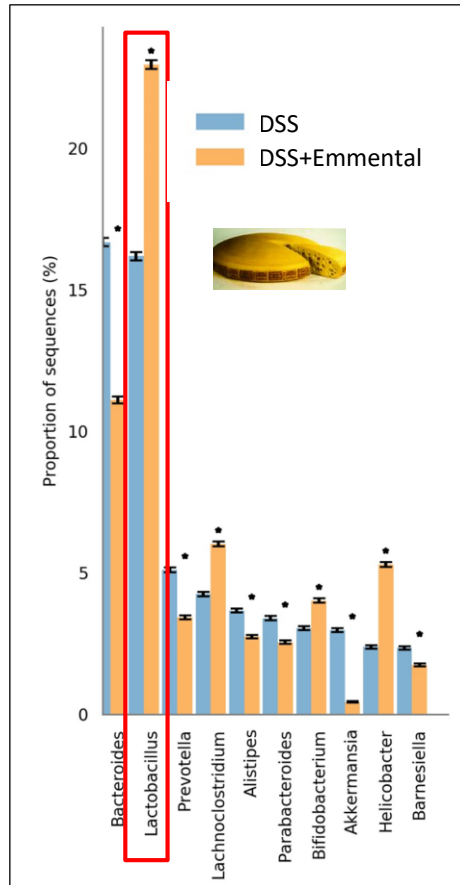


INRAE

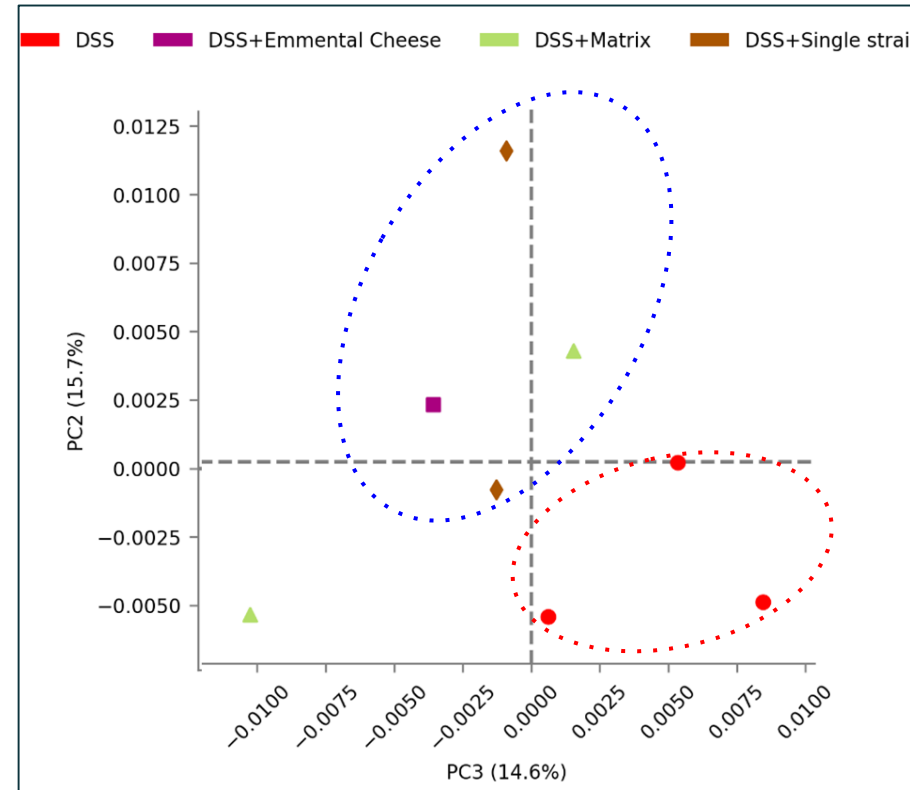
Propionibacteria cheese, Inflammation & gut microbiota

FoodMicro 2024. G. Jan

➤ Cheese modulates the gut microbiota in colitis conditions



PCA - N° genes/ KEGG pathways



➤ Read more





ELSEVIER

Food Bioscience

Volume 56, December 2023, 103327



Functional Swiss-type cheeses promote beneficial effects in mice gut microbiome during homeostasis and inflammation

Rodrigo Dias de Oliveira Carvalho^{a b}, Houem Rabah^c, Juan Carlos Ariute^d,
Flávia Figueira Aburjaile^d, Bertram Brenig^e, Eric Guédon^c, Yves Le Loir^c, Gwénaél Jan^c,
Vasco Azevedo^a  

➤ See also Valérie Gagnaire this afternoon!!!!

➤ Thank you for your attention



Propionibacteria cheese, Inflammation & gut microbiota

FoodMicro 2024. G. Jan



UNIVERSIDADE FEDERAL DE MINAS GERAIS