



Date and place of birth: October 20, 1966, Saint Briec (France)

Nationality: French

Languages: French, English

<https://orcid.org/0000-0001-8694-3381>

Professional address:

UMR1253, STLO INRAE-Institut Agro, 85, rue de Saint Briec CS84215

35042 Rennes cedex, France. Phone : (33-1) 23 48 57 41 Fax : (33-1) 23 48 53 50.

E-mail : gwenael.jan@inrae.fr

Current Research

My **research activity**, in collaboration with French and international academics, stakeholders, and technical centres, focuses on both probiotic and technological abilities of **beneficial bacteria** from the incredible biodiversity of traditional **fermented food** products. Mining this biodiversity, we are revealing the ability, in selected strains of such bacteria, to modulate key parameters of **human physiology** such as proliferation, differentiation, apoptosis, inflammation and **mucosal immunity**. This exciting field of research opens new perspectives for the development of **functional fermented foods** for target populations.

Education

- 2002** HDR (Habilitation à Diriger des Recherches), University of Rennes I, France.
1995 PhD in Life Sciences, University Rennes I, France
1991 D.E.A. (Diplôme d'Etudes Approfondies, MSc, Master's Degree of Science) in Molecular & Cell Biology, University of Rouen, France
1990 Maîtrise (Bachelor's degree) in Biochemistry, University of Rouen, France

Research and Professional Experience

- Since 2012** Research Director (DR2 INRAE), at the Joint Research Unit STLO, Science and Technology of Milk and Egg Products, leader of the research activity "probiotic properties of dairy bacteria".
- 1998-2011** Research scientist at the Laboratoire de Technologie Laitière, INRA, Rennes, France.
Project: Probiotic abilities of Propionibacterium freudenreichii.
- 1995-1997** Post-Doctoral Research at the Institute of Medical Sciences, University Aberdeen, Scotland.
Projects: Characterizing TRP, a new human transcription factor (supervision Pr.P.A. Moore)
Deciphering the sorting of human prohormone convertase PC2 to regulated secretory pathway (supervision Pr. K. Docherty)
- 1992-1996** Post-Graduate Research at the UMR CNRS 6026 "Membranes et Osmorégulation", University Rennes I, France.
Project: Characterizing mycoplasmas' acylated membrane proteins of as potent vaccines
- 1992:** Graduate Research at the Laboratoire de Microbiologie, URA CNRS 203, University of Rouen, France.
Project: secretion of proteins in the soil bacterium Myxococcus xanthus

Expertise field (keywords)

Food Microbiology, Probiotics, Proteomics, Surface Proteome, Cheese, Propionic Acid Bacteria, Lactic Acid Bacteria, Dairy products, Bacterial Interactions, Host Adaptation, Immunomodulation, Apoptosis.

Bibliometrics

H-Index: 38 - 118 publications in peer-reviewed journals, average citation per item: 44.99 – 3 international patents - 6 book chapters.

Major publications

Jan G, Belzacq AS, Haouzi D, Rouault A, Metivier D, Kroemer G, Brenner C. 2002. Propionibacteria induce apoptosis of colorectal carcinoma cells via short-chain fatty acids acting on mitochondria. *Cell Death Differ* 9:179–188.

Lan A, Bruneau A, Bensaada M, Philippe C, Bellaud P, Rabot S, Jan G. 2008. Increased induction of apoptosis by *Propionibacterium freudenreichii* TL133 in colonic mucosal crypts of human microbiota-associated rats treated with 1,2-dimethylhydrazine. *Br J Nutr* 100:1251–1259.

Foligné B, Deutsch SM, Breton J, Cousin FJ, Dewulf J, Samson M, Pot B, Jan G. 2010. Promising immunomodulatory effects of selected strains of dairy propionibacteria as evidenced *in vitro* and *in vivo*. *Appl Environ Microbiol* 76:8259–8264.

Foligné B, Breton J, Mater D, Jan G. 2013. Tracking the microbiome functionality: focus on *Propionibacterium* species. *Gut* 62:1227–1228.

Deutsch S-M, Mariadassou M, Nicolas P, Parayre S, Le Guellec R, Chuat V, Peton V, Le Maréchal C, Burati J, Loux V, Briard-Bion V, Jardin J, Plé C, Foligné B, Jan G, Falentin H. 2017. Identification of proteins involved in the anti-inflammatory properties of *Propionibacterium freudenreichii* by means of a multi-strain study. *Sci Rep* 7:46409.

Rabah H, do Carmo FLR, Carvalho RD de O, Cordeiro BF, da Silva SH, Oliveira ER, Lemos L, Cara DC, Faria AMC, Garric G, Harel-Oger M, Le Loir Y, Azevedo V, Bouguen G, Jan G. 2020. Beneficial Propionibacteria within a Probiotic Emmental Cheese: Impact on Dextran Sodium Sulphate-Induced Colitis in Mice. *Microorganisms* 8:380.

George F, Titécat M, Barois N, Daniel C, Garat A, Jan G, Foligné B. 2022. A Unique Enhancement of *Propionibacterium freudenreichii*'s Ability to Remove Pb(II) from Aqueous Solution by Tween 80 Treatment. *Int J Mol Sci* 23:9207.