Prénom, Nom/ First Name, Last Name:

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Compétences / Skills

Microbiologie et biochimie alimentaire : mécanismes d'action de biomolécules antimicrobiennes sur des bactéries cibles (effets sur leur cultivabilité/viabilité/ membrane (intégrité, potentiel et fluidité membranaire...)) in vitro, dans des aliments ou sur des biofilms.

Food Microbiology and biochemistry: mechanisms of action of antimicrobial biomolecules on target bacteria (effects on their culturability / viability / membrane (integrity, potential and membrane fluidity ...)) in vitro, in food or on biofilms.

Cursus: / Education:

- HDR (Habilitation à Diriger des Recherches),Université Lyon 1, 2008.
- Doctorat de Génie Biologique et Médical de l'Université Lyon 1. 2000.
- D.E.A. de Nutrition et Sciences des Aliments option "Génie des Procédés" à l'Université Blaise Pascal de Clermont Ferrand, 1994
- Diplôme d'Ingénieur en Génie Biologique : Polytech Clermont - CUST, 1994.

- Graduation as Ph D supervisor (Habilitation à Diriger des Recherches) - Lyon 1 University, 2008.
- Ph. D thesis, Biological and Medical Engineering, Lyon 1 University, 2000.
- "Diplôme d'Etudes Approfondies (M. Sc.) in Nutrition and Food Science (Specialty: Food Engineering), Blaise Pascal University, Clermont-Ferrand, 1994
- U-Engineer Diploma in Biological Engineering, Polytech Clermont, 1994

Postes occupés: / Positions:

Maître de Conférences classe normale en Microbiologie et Biochimie (IUT Lyon 1, depuis 2000 (passage Hors classe en 2017)

Associate professor in Food Microbiology and Biochemistry, University of Lyon (IUT Lyon 1, since 2000)

Activités d'enseignement :

Maître de Conférences en Microbiologie et Biochimie Alimentaires, IUT Lyon 1, Département Génie Biologique, spécialité: Industries agro-alimentaires et biologiques, Bourg en Bresse
Cours enseignés (de 200 à 300 h / an, L1, L2, L3, M1 et M2)
- Microbiologie générale, industrielle et alimentaire (cours/TD/TP)
- Chimie et biochimie générale et alimentaire (cours/TD/TP)

/ Teaching activities :

Associate Professor in Food Microbiology & Biochemistry, IUT Lyon 1, Dept of Biological Engineering, specialty: Food and Biological Industries, Bourg en Bresse
Courses taught (from 200 to 300 h/year, under- and post-graduate levels):
- General, industrial and food microbiology (lectures and lab)
- General and food chemistry and biochemistry (lectures and lab)

Thèmes de recherche:

Mécanismes d'action de biomolécules* antibactériennes (effets sur la cultivabilité/viabilité et membrane), essais in vitro, matrices alimentaires, biofilms.
Développement d'approches innovantes/mise en œuvre de biomolécules* antimicrobiennes (association à des biopolymères (protection/relargage), production in situ de bactériocines). *biomolécules antibactériennes: surnageants de cultures de bactéries lactiques, hydrolysats enzymatiques de protéines alimentaires/extraits végétaux ;

/ Research topics :

Mechanisms of action of antibacterial biomolecules * (effects on culturability / viability and membrane), in vitro tests, food matrices, biofilms.
Innovative strategies for the implementation of antimicrobial biomolecules * (combination with biopolymers (protection and controlled release), in situ production of bacteriocins). * antibacterial biomolecules: supernatants of cultures of lactic acid bacteria, enzymatic hydrolysates of food proteins or plant extracts;

Production scientifique/ Scientific production:

- Co-author of 59 articles in peer-reviewed international scientific journals (see publications)

https://scholar.google.fr/citations?user=vgbks2EAAAAJ&hl=fr&oi=ao

Jrad Z, El-Hatmi H, Adt I, Gouin S, Jardin, J, Loussaief O, Dbara M, Arroum S, Khorchani T, Degraeve P, Oulahal N (in press). Antilisterial activity of dromedary lactoferrin peptic hydrolysates. Journal of Dairy Science. https://doi.org/10.3168/jds.2018-15548

Eghbal N, Dumas E, Yarmand MS, Mousavi M, Oulahal N, Gharsallaoui A (in press). Antimicrobial films based on pectin and sodium caseinate for the release of antifungal natamycin. Journal of Food Processing and Preservation. DOI: 10.1111/jfpp.13953.

Bouarab-Chibane L, Forquet V, Lantéri P, Clément Y. Léonard-Akkari L, Oulahal N, Degraeve P, Bordes C (2019). Antibacterial properties of polyphenols: characterization and QSAR (Quantitative structure–activity relationship) models. Frontiers in Microbiology, 10, 829.

Cottaz A, Bouarab-Chibane L, De Clercq J, Oulahal N, Degraeve P, Joly C (2019). Potential of incorporation of antimicrobial plant phenolics into polyolefin-based food contact materials to produce active packaging by melt-blending: proof of concept with Isobutyl-4-Hydroxybenzoate. Frontiers in Chemistry, 7, 148, doi: 10.3389/fchem.2019.00148

Bouarab-Chibane L, Degraeve P, Ferhout H, Bouajila J, Oulahal N (2019). Plant antimicrobial polyphenols as potential natural food preservatives. Journal of the Science of Food and Agriculture, 99 (4), 1457-1474

Almi-Sebbane D, Adt I, Degraeve P, Jardin J, Bettler E, Terreux R, Oulahal N, Mati A (2018). Casesidin-like anti-bacterial peptides in peptic hydrolysate of camel milk b-casein. International Dairy Journal, 86:49-56

Kaewprachu P, Ben Amara C, Oulahal N, Gharsallaoui A, Joly C, Tongdeesoontorn W, Rawdkuen S, Degraeve P (2018). Gelatin films with nisin and catechin for minced pork preservation. Food Packaging and Shelf Life, 18, 173-183.

Chevalier E, Assezat G, Prochazka F, Oulahal N (2018). Casein/wax blend extrusion for production of edible films as carriers of potassium sorbate -A comparative study of waxes and potassium sorbate effect. Food Packaging and Shelf Life, 16, 41-50. DOI 10.1016/j.fpsl.2018.01.005

Bouarab-Chibane L, Oulahal N, Dumas E, Trinh NTT, Thanh ML, Bouajila J, Souchard JP, Degraeve P (2018). Effect of interaction with food constituents on plant extracts antibacterial activity. Food Science and Applied Biotechnology, 1(1), 77-85. DOI10.30721/fsab2018.v1.i1.27

Bouarab-Chibane L, Forquet V, Clément Y, Lanteri P, Bordes C, Bouajila J, Degraeve P, Oulahal N (2018). Effect of interactions of plant phenolics with bovine meat proteins on their antibacterial activity. Food Control, 90, 189-198.

Chevalier E, Assezat G, Prochazka F, Oulahal N (2018). Development and characterization of a novel edible extruded sheet based on different casein sources and influence of the glycerol concentration, Food Hydrocolloids, 75, 182-191.

Ben Amara C, Eghbal N, Degraeve P, Oulahal N, Gharsallaoui A (2017). pH-dependent complexation of lysozyme with low methoxyl (LM) pectin. Food Chemistry, 236, 127-133.

Ben Amara C, Kim L, Oulahal N, Degraeve P, Gharsallaoui A, (2017). Using complexation for the microencapsulation of nisin in biopolymer matrices by spray-drying. Food Chemistry, 236, 32-40.

Bouarab-Chibane L, Ouled-Bouhedda B, Léonard L, Gemelas L, Jalloul J, Ferhout H, Cottaz A, Joly C, Degraeve P, Oulahal N (2017). Preservation of fresh ground beef patties using plant extracts combined with a modified atmosphere packaging (2017) European Food Research and Technology ,243 (11), 1997-2009.

Brunon C, Chadeau E, Oulahal N, Grossiord C, Dubost L, Simon F, Bessueille F, Degraeve P, Léonard D (2017). Antimicrobial finishing of textiles intended for food processing industry by plasma enhanced chemical vapor deposition - physical vapor deposition of Ag-SiOCH composites coated with AlxOy or SiOCH encapsulation layers. Thin Solid Films, 628, 132-141.

Eghbal N, Degraeve P, Oulahal N, Yarmand MS, Mousavi ME, Gharsallaoui A (2017). Low methoxyl pectin/sodium caseinate interactions and composite film formation at neutral pH. Food Hydrocolloids, 69, 132-140.