VANDANJON Laurent

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***Education***

1991: Engineer in Food-Processing - ONIRIS (ex-ENITIAA) Nantes

1992: Engineer in Environmental Health - EHESP (ex-ENSP) Rennes

1997: PhD in Process Engineering - GEPEA, University of Nantes

*Title:* Valorization of marine microalgae. Concentration and purification by membrane processes of pigments extracted from *Haslea ostrearia*.

***Work experience and current position***

1992-1993: Food-Processing Engineer, ADRIA Quimper

1993-1998: Researcher and teacher in Chemical Engineering, IUT St Nazaire

Since 1998: Associate Professor (CNU 62) at the University of South Brittany (UBS, France)

Senior expert in Process Engineering / Fluid dynamics applied to Marine Biotechnologies

Member of the Laboratory of Marine Biotechnologies and Chemistry LBCM, UBS Vannes

***Summary of research activities and skills***

My research activity aims at valuing the marine algal biomass (including aqueous phase and bioassimilable minerals) by the means of authentic technologies (i.e membrane filtration, eco-extraction) through a biorefinery process with applications in cosmetics and health.

On the other hand, an upstream research on the syntropic role of water is continued. Specific waters (algal cellular water, seawater, dynamized water) are used to study the interfacial water and the effects of non-chemical treatments such as electromagnetic fields, resonance frequencies, nanobubbles, marine limestones, etc. A global approach based on information physics and quantum electrodynamics is an original way to propose models explaining the phenomena observed, for example in the case of high dilutions.

Keywords: Marine macroalgae, Bioactive molecules, Water, Biorefining, Breakthrough technologies

***Summary of teaching activities***

Licence Pro “Cosmetics” (UFR SSI Vannes): Separation and Extraction processes, Forming ingredients

Master “Biotechnologies” (UFR SSI Lorient): Water Treatments, Marine processes

Licence Pro “Waste treatment processes” (IUT Pontivy): Physico-chemical treatments

***Pedagogic and administrative duties***

Responsible of the Licence Pro “Biotechnologies and Bioindustries” (Cosmetics and Health Products), UBS

***5 publications***

M. Puspita, G. Bedoux, L. Vandanjon, N. Bourgougnon *et al* (2020). Indonesian sargassum species bioprospecting, *Advances in Botanical Research*, vol. 95, Chap. 5, pp 114-147, Ed. N. Bourgougnon

L. Vandanjon, M. Deniel *et al* (2017). Seasonal variation of the biochemical composition of the proliferative macroalgae *Sargassum muticum* estimated by Fourier Transform Infra-Red (FTIR) spectroscopy. *Journal of Analytical, Bioanalytical and Separation Techniques,* 2(2): 1- 10.

L. Vandanjon, C. Hersant, A. Tanniou, F. Guérard, V. Stiger (2017) The proliferative macroalgae *Sargassum muticum* as an interesting marine resource on the European Atlantic coasts: comparison of different membrane filtration systems for recovering active phenolic compounds.  *J. Marine Biology and Aquaculture*, Vol 3, issue 1, pp 1-7

M. Puspita, L. Vandanjon *et al* (2017). Total phenolic content and biological activity of *Sargassum muticum* enzymatic hydrolysates, *Journal of Applied Phycology*, pp 1-17,DOI: 10.1007/s10811-017-1086-6 (IF = 2.37)

L. Vandanjon, L. Vallet, T. Le Glatin, P. Déléris, R. Baron, P. Bourseau, J. Dumay (2016). Valorization of the macroalga *Sargassum muticum* by enzymatic hydrolysis. Interest of surfactants to improve the extraction of phlorotannins and polysaccharides. *Journal of Marine Biology and Aquaculture*, 2, (1), pp 1-7.