

## Docteur en biologie, HDR

né le 3 novembre 1962, nationalité française

## Directeur de Recherche 1ère classe au CNRS

Biochimie et biologie moléculaire des défenses, physiologie cellulaire des algues marines, écologie chimique- Sections 66 du CNU et 23 du CoN-CNRS

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## Diplômes

**DEA (MSc)** Océanologie Biologique Université Pierre et Marie Curie-Paris6, sept. 1988

**Doctorat** de l'Université de Bretagne Occidentale. « Recherche, production, purification et caractérisation d'hydrolases bactériennes pour la production d'oligosaccharides des parois d'algues rouges ». Direction B. Kloareg

**Habilitation à diriger des recherches.** Université de Bretagne Occidentale. 09/05/2003

## Parcours professionnel

**1988-1992** Thèse de doctorat Direction B. Kloareg, Station Biologique de Roscoff.

**1992-1993:** Post-doctorat, Biologie moléculaire des algues rouges, Institute for Marine Biosciences, NRC, Halifax, N.S., Canada (Dr M. Reith)

**1993-1996** CR2 CNRS- Section 27 du Département Sciences de la Vie (recrutement octobre 1993, titularisation printemps 1995)

**1996-2006** CR1 CNRS, en janvier 1999 affectation à l'ex UMR 1931 CNRS-Goëmar, UMR 7139 CNRS- UPMC, Station Biologique de Roscoff. Responsable de l'équipe : « Biochimie des défenses chez les algues depuis 2002».

**2006-2014** DR2 CNRS, depuis octobre 2006, « Défenses et signalisation chimique des macro-algues »

**2014-présent** DR1 CNRS, depuis octobre 2006, « Défenses et signalisation chimique des macro-algues »

## PRODUCTION SCIENTIFIQUE

>83 publications dans des revues internationales à comité de lecture, 6 chapitres d'ouvrages et 13 articles dans des compte-rendus de congrès ou des articles de synthèse et 9 brevets.

1. Potin P., Sanseau A., Le Gall Y., Rochas C. & Kloareg B. 1991. Purification and characterization of a new  $\square$ -carrageenase from a marine *Cytophaga*-like bacterium. *Eur. J. Biochem.*, **201**: 241-247.
2. Hily C., Potin P. & Floc'h J.Y. 1992. Structure of subtidal algal assemblages on soft bottom sediments: fauna/flora interactions and role of disturbances in the Bay of Brest, France. *Mar. Ecol. Progr. Ser.*, **85**: 115-130.
3. Potin P., Patier P., Rochas C., Yvin J. C., Floc'h J. Y. & Kloareg B. 1992. Chemical characterization of the cell wall polysaccharides from tank-cultivated and wild plants of *Delesseria sanguinea* (Hudson) Lamouroux (Ceramiales, Delesseriaceae): culture patterns and potent anticoagulant properties. *J. Appl. Phycol.*, **4**: 119-128.
4. Potin P., Richard C., Rochas C. & Kloareg B. 1993. Purification and characterization of an  $\square$ -agarase from *Alteromonas agarlyticus* (Cataldi) comb. nov. strain GJ1B. *Eur. J. Biochem.*, **214**: 599-607.
5. Rochas C., Potin P. & Kloareg B., 1994. Nmr spectroscopic investigation of agarose oligomers produced by an  $\square$ -agarase. *Carbohydr. Res.*, **253**: 69-77.
6. Potin P., Richard C., Barbeyron T., Henrissat, Gey, C., B, Pétillot Y., Forest E., Dideberg O., Rochas C., & Kloareg B., 1995 - Processing and hydrolytic mechanism of the *cgkA*-encoded  $\square$ -carrageenase of *Alteromonas carrageenovora*. *Eur. J. Biochem.*, **228**: 971-975.
7. Barbeyron T., Potin P., Richard C., Collin, O., & Kloareg B., 1995 - Molecular cloning, nucleotide sequence and expression of an arylsulphatase gene from *Alteromonas carrageenovora*. *Microbiology*, **141**, 2897-2904.
8. Patier, P., Potin P., Rochas, C., Kloareg B., Yvin, J.C., & Liénart Y. 1995 - Free and silica bound oligo-kappa-carrageenans elicit laminarinase activity in *Rubus* cells and protoplasts. *Plant Science*, **110**, 27-35.
9. Chavagnat, F., Duez, C., Guinand, M., Potin P., Barbeyron T., Henrissat B., Wallach, J. & Ghysen, J.M. 1996. Cloning, sequencing and overexpression in *Escherichia coli* of the alginate lyase-encoding *algi* gene of *Pseudomonas alginovora*. Identification of three classes of alginate lyases. *Biochem. J.*, **319**, 575-583.
10. Zinoun, M., Diouris, M. Potin P., Floc'h, J.-Y. & Deslandes, E. 1997. Evidence of sulfohydrolase activity in the red alga *Calliblepharis jubata*. *Bot. Mar.*, **40**, 49-53.
11. Barbeyron, T., Gérard, A., Potin P., Henrissat, B. & Kloareg B. 1998. The kappa-carrageenase of the marine bacterium *Cytophaga drobachiensis* : structural and phylogenetic relationships within family-16 of glycoside hydrolases. *Mol. Biol. Evol.*, **15**, 528-537.
12. Lépagnol-Descamps, V., Richard, C., Lahaye, M., Potin P., Yvin, J.C., & Kloareg B. 1998. Purification and determination of the action pattern of *Haliotis tuberculata* laminarinase. *Carbohydr. Res.*, **310**, 283-289.
13. Potin P., Bouarab, K., Kuepper, F.C., & Kloareg, B. 1999. Oligosaccharide recognition signals and defence reactions in marine plant-microbe interactions. *Curr. Opin. Microbiol.*, **2**, 276-283.
14. Bouarab K., Potin P., Correa, J. & Kloareg B. 1999. Sulfated oligosaccharides mediate the interaction between the red alga *Chondrus crispus* and its green algal endophyte. *Plant Cell.*, **11**, 1635-1650.
15. Corellou, F., Potin P., Brownlee, C., Kloareg, B., and Bouget, F.-Y. 2000. Inhibition of the establishment of a zygotic polarity by protein tyrosine kinase inhibitors leads to an alteration of embryo pattern in *Fucus*. *Dev. Biol.*, **219**, 195-182.
16. Barbeyron, T., Michel, G., Potin P., Henrissat, B. & Kloareg B. 2000.  $\square$ -carrageenases constitute a novel family of glycoside hydrolases, unrelated to that of  $\square$ -carrageenases. *J. Biol. Chem.*, **15**, 35499-35505.
17. Küpper, F.C., Kloareg, B., Guern, J., and Potin P. 2001. Oligoguluronates elicit an oxidative burst in the brown algal kelp *Laminaria digitata*. *Plant Physiol.*, **125**, 278-291.
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20. Lemonnier-Le Penhuizic, C., Châtelet C., Kloareg B., & Potin P. 2001 - Oligocarrageenans enhance stress-induced microspore embryogenesis in *Brassica oleracea*. *Plant Science*, **160**, 1211-1220.
21. Potin P., Bouarab, K., Salaun, J.-P., Pohnert, G., & Kloareg, B. 2002. Biotic interactions of marine algae. *Curr. Opin. Plant Biol.*, **5**, 308-317.
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28. Berglin M., Delage L., Potin P., Vilte, H and Elwing H. 2004. The enzymatic cross-linking of a phenolic polymer extracted from the marine alga *Fucus serratus*. *Biomacromolecules*, **5**, 2376-2383.
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39. Weinberger F., Beltran J., Correa J. A., Lion U., Pohnert G., Steinberg P., Kloareg B, Potin P (2007). Spore release in *Acrochaetium* sp. (Rhodophyta) is bacterially controlled *J. Phycol.* **43**: 235-241.
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53. Cosse A, Potin P, Leblanc C. (2009) Patterns of gene expression induced by oligoguluronates reveal conserved and environment-specific molecular defense responses in the brown alga *Laminaria digitata*. *New Phytol.* 182:239–50.
54. Goulitquer S, Ritter A, Thomas F, Ferec C, Salaün JP, Potin P. (2009) Release of volatile aldehydes by the brown algal kelp *Laminaria digitata* in response to both biotic and abiotic stress. *Chembiochem.* 10: 977–82.
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77. Ritter A, Dittami SM, Goulitquer S, Correa JA, Boyen C, P. Potin, Tonon T. **2014**. Transcriptomic and metabolomic analysis of copper stress acclimation in *Ectocarpus siliculosus* highlights signaling and tolerance mechanisms in brown algae. **BMC Plant Biol**. 14:116. doi: 10.1186/1471-2229-14-116.
78. Küpper FC, Leblanc C, Meyer-Klaucke W, P. Potin, Feiters MC **2014**. Different speciation for bromine in brown and red algae, revealed by in vivo X-ray absorption spectroscopic studies **J Phycol**. 50: 652–664.
79. Thomas F, Cosse A, Le Panse S, Kloareg B, P. Potin, Leblanc C. **2014**. Kelps feature systemic defense responses: insights into the evolution of innate immunity in multicellular eukaryotes. **New Phytol**. 204:567-76

80. Collèn, J., M.L. Cornish, J. Craigie, E. Ficko-Bean, C. Hervé, **S.A. Krueger-Hadfield**, C. Leblanc, G. Michel, P. Potin, T. Tonon and C. Boyen **2014.** *Chondrus crispus* – a present and historical model organism for red seaweeds. In: *Advances in Botanical Research*, 71: 53-89 *Sea Plants*, ed. N. Bourgougnon, Elsevier
81. Buschmann AH, Prescott S, Potin P, Faugeron S, Vásquez JA, Camus C, Infante J, Hernández-González MC, Gutierrez A, Varela DA **2014.** The Status of Kelp Exploitation and Marine Agronomy, with Emphasis on *Macrocystis pyrifera*, in Chile. In: *Advances in Botanical Research*, 71 : 161-188. *Sea Plants*, ed. N. Bourgougnon, Elsevier.
82. Fournier JB, Rebuffet E.; Delage L, Grijol, R , Meslet-Cladiere, L , Rzonca, J, Potin P, Michel, G,Czjzek, M, Leblanc, C **2014.** The Vanadium Iodoperoxidase from the Marine Flavobacteriaceae Species *Zobellia galactanivorans* Reveals Novel Molecular and Evolutionary Features of Halide Specificity in the Vanadium Haloperoxidase Enzyme Family. *Appl. Env. Microbiol* 80 : 7561-7573.
83. Creis E, Delage L, Charton S, Goulitquer S, Leblanc C, Potin P, Ar Gall E. **2015.** Constitutive or Inducible Protective Mechanisms against UV-B Radiation in the Brown Alga *Fucus vesiculosus*? A Study of Gene Expression and Phlorotannin Content Responses. *PLoS One*. 10(6):e0128003.
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85. Tapia JE, González B, Goulitquer S, **Potin P**, Correa JA. **2016.** Microbiota Influences Morphology and Reproduction of the Brown Alga *Ectocarpus sp.* *Front Microbiol*. 27:197.
86. Wells ML, **Potin P**, Craigie JS, Raven JA, Merchant S, Helliwell KE, Smith AG, Camire ME, Brawley SH, 2016. Algae as nutritional and functional food sources: revisiting our understanding. Journal of Applied Phycology, in press (DOI 10.1007/s10811-016-0974-5)
87. Ritter A, Cabioch L, Brillet-Guéguen L, Corre E, Cosse A, Darteville L, Duruflé H, Fasshauer C, Goulitquer S, Thomas F, Correa JA, Potin P, Faugeron S, Leblanc C. **2017.** Herbivore-induced chemical and molecular responses of the kelps *Laminaria digitata* and *Lessonia spicata*. *PLoS One* ;12(3):e0173315.

## Brevets

1. Barbeyron, T., Richard, C., Potin, P., Henrissat, B., Yvin J.C. et Kloareg, B. (1997) Gènes codant pour des iota-carraghénases et leur utilisation pour la production d'enzymes de biodégradation des carraghénanes. **French patent** n° 9612204 (07/10/96).
2. Barbeyron, T., Richard, C., Potin, P., Henrissat, B., Yvin J.C. et Kloareg, B. (1997) Gènes codant pour des kappa-carraghénases et leur utilisation pour la production d'enzymes de biodégradation des carraghénanes. **French patent** n°9701148 (3/02/97).
3. Flament, D., Barbeyron, T., Yvin J.C., Potin, P., et Kloareg, B. (1998) Gènes codant pour des  $\square$ -agarases et leur utilisation pour la production d'enzymes de biodégradation des agars **French patent** n°9807419 (12/06/98).
4. Genicot, S., Richard, O, Penninkhof, B., de Ruiter G., Potin, P., Kloareg, B., and Rudolph, B. (2000) Galactan sulfohydrolases, corresponding amino acid and nucleotide sequences, sulfohydrolase preparation, processes and products thereof. **US patent** n° 09/567,003
5. Potin, P., Bouarab, K, Salaun, J.-P., Yvin J.C. (2002). Procédé de préparation d'acides gras polyinsaturés libres et de leurs métabolites d'oxydation. **French patent** n° 0209912 (02/08/02).
6. Leblanc, C., Colin, C., Delage L., Roeder, V., Kloareg, B., Potin, P. (2003). Haloperoxidases from the brown alga *Laminaria digitata* **European patent** n° 03290518.4 (04/03/03).
7. Leblanc, C., L. Delage, G. Michel, E. Rebuffet, M. Czjzek, and P. Potin, **2011.** Bacterial iodoperoxidases from *Zobellia galactanivorans*, Methods of preparation and uses thereof, European Patent n° 11305864.8, France, date de dépôt 05/07/11.
8. Delage L., Meslet-Cladiere L., Goulitquer S. and Potin P. **2011.** Utilisation de "polyketide synthases de type III (PKS III) recombinantes d'algues brunes marines, France, n° 11 58728, date de dépôt 29/09/2011. PCT procedure in progress.
9. Le Sourc F, Jam M, Genicot S, Potin P, Kloareg B 2014.Oligo- $\lambda$ -carraghenanes, compositions cosmétique, dermatologique et pharmaceutique les contenant, et leurs utilisations. France, n°BNT218168FR00 - , date de dépôt 21/05/2014. PCT procedure in progress.

## Chapitres de livres et compte-rendus de congrès:

1. Potin, P., Floc'h, J.Y., Augris, C. & Cabioch, J. 1990. Annual growth rate of the calcareous red alga *Lithothamnion corallioïdes* (Corallinales, Rhodophyta) in the bay of Brest, France. *Hydrobiologia*, 204/205: 263-267.
2. Deslandes, E., Potin, P., Zinoun, M. & Floc'h, J.Y. 1990. Contribution to the content and nature of the phycocolloid from *Kallymenia reniformis* (Cryptonemiales, Rhodophyta) *Hydrobiologia*, 204/205:60-608.
3. Kloareg, B., Liu, X.W., Boyen, C., Le Gall, Y., Zha, X.D., & Potin, P., 1989. Perspectives d'applications des biotechnologies végétales à la micropropagation et à l'amélioration génétique des algues marines d'intérêt économique. *Océanis*, 15: 649-660.
4. Kloareg, B., Barbeyron, T., Flament, D., Michel, G., Richard, C., Potin, P., & Henrissat, B. 1998. Microbial degradation of sulfated galactans. Towards novel utilizations of red algal polysaccharides. in *Marine Microorganisms for industry*, Y. le Gal & A. Muller-Feuga Eds., Ifremer Brest (200 pp.), 137-143.
5. Barbeyron, T., Flament, D., Michel, G., Richard, C., Potin, P., & Henrissat, B. & Kloareg, B. 1998. Microbial degradation of algal polysaccharides and molecular structure of polysaccharidases. *Marine Microorganisms: Research issues for biotechnology*. EC-US Workshop DGXII, Brussels, 175-186.
6. Bouarab, K., Kloareg, B., Correa, J. & Potin, P. 2001. The *Chondrus crispus* – *Acrochaete operculata* host-pathogen association, a novel model in glycobiology. *J. appl. Phycol.*, 13, 185-193.
7. Buschmann, A.H., Correa, J.A., Westermeier, R., Paredes, M.A., Aedo, D., Potin, P., Aroca, G., Beltrán, J. & Hernández-González, M.C. (2001). Cultivation of Gigartina skottsbergii (Gigartinales, Rhodophyta): Recent advances and challenges for the future. *J. appl. Phycol.* 13: 253-265
8. Bouarab, K., Kloareg, B., Potin, P., & Correa, J. 2001. Ecological and biochemical aspects of algal infectious diseases.: In *Current approaches in basic and applied phycology. International workshop (FONDAP-CNRS), Las Cruces (Chile), 5-12/12/1998.*, *Cahiers de Biologie Marine* 42, 91-100.
9. Barbeyron, T., Flament, D., Michel, G., Potin, P. & Kloareg, B. 2001 The sulphated-galactan hydrolases, agarases and carrageenases : structural biology and molecular evolution. : In *Current approaches in basic and applied phycology. International workshop (FONDAP-CNRS), Las Cruces (Chile), 5-12/12/1998.*, *Cahiers de Biologie Marine* 42, 169-183.
10. Kloareg, B., Bouarab, K., Adas, F., Pohnert, G., Salaün, J.-P. & Potin, P. 2002. Biochemical bases of marine plant-microbe interactions : novel evidence on the evolution of plant immunity. In *Biology of Plant-Microbe Interactions, vol. 3 Proceedings of the 10<sup>th</sup> Interanational Congress MPMI, July 10-14, 2001*. S.A. Leong, C. Allen, E.W. Triplett Eds, International Society for Plant-Microbe Interactions, St Paul, Minnesota, USA.
11. La Barre, S., Weinberger, F., Kervarec, N. & Potin, P. 2004. Monitoring defensive responses in macroalgae - limitations and perspectives. *Phytochem Reviews*, 3: 371-379.
12. Cock, J.M., Leblanc, C., Colin, C., Collen, J., Roeder, V., Hervé, C., Rousvoal, S., Michel, G., Potin, P., Boyen, C. and Kloareg, B. (2004) Genomic analysis of economically important seaweeds. *Marine Biotechnology*, 6, S43-S47.
13. Potin, P. and Leblanc, C., 2006. Phenolic-based adhesives of marine brown algae. In *Biological Adhesives*. Chapter 6. Ed By AM Smith and JA Callow, Springer, Berlin, Germany, pp. 105-119.
14. Ianora, A., Boersma M., Casotti, R., Fontana, A., Harder J., Hoffmann F., Pavia, H., Potin, P., Poulet, S. A., Toth, G. 2006. New Trends in Marine Chemical Ecology. *Estuaries and Coasts* 29, 531–551.
15. Leblanc C., Colin C., Cosse A., Delage L., La Barre S., Morin P., Fiévet B., Voiseux C., Ambroise Y., Verhaeghe E., Amouroux D., Donard O., Tessier E., Potin P. 2006. Iodine transfers in the coastal marine environment: the key role of brown algae and of their vanadium-dependent haloperoxidases. *Biochimie*, 1773-1785.
16. Potin, P., 2008. 12. Oxidative Burst and Related Responses in Biotic Interactions of Algae, in *Algal Chemical Ecology*, C.D. Amsler, Editor Springer XVIII: Berlin. pp.245-272.
17. Potin, P., B. Fiévet, C. Leblanc, E. Darrouzet, E. Ansoborlo, and T. Pourcher, 2009. Chapitre 26. Iode, in *Toxicologie Nucléaire Environnementale et Humaine*, M.-T. Ménager, J. Garnier-Laplace, and M. Goyffon, Editors. Lavoisier: Paris. pp.483-499.
18. Weinberger F. and Potin P., 2010. Red algal defenses in the genomic age. In *Red Algae in the Genomics Age*. J Seckbach & D Chapman, Editors, Springer Berlin. pp. 457-477.
19. Potin, P., 2012. Intimate associations between epiphytes, endophytes and parasites of seaweeds, in *Seaweed Biology, Ecological Studies*, C. Wiencke and K. Bischof, Editors. Springer-Verlag: Berlin Heidelberg. pp.203-234.
20. Gaillard F. and Potin P. 2013. Proteomics and metabolomics of marine organisms: current strategies and knowledge. in *Outstanding Molecules of Marine Organisms*. J.M. Kornprobst and S. La Barre, Editors. Wiley. In press.

## Publications récentes pour un large public

- Potin P. (2008) Biologie Marine. Article du Dictionnaire d'histoire de Bretagne. Ed Skol Vreizh Morlaix.
- Leblanc C. et Potin P. (2010). L'air iodé du bord de mer : de la défense des algues à la formation des nuages. *Biofutur*, 308, 49-51.
- Leblanc C., Michel G., Potin P. et Kloareg B. (2011). La chimie, entre le vert et le bleu. *Pour la Science*, dossier n°73, 46-51.

**Communications.**

- **XIIIth International Seaweed Symposium**, Vancouver, 17-23 August 1989.  
P. Potin, P. Patier, C. Rochas, J. C. Yvin, J. Y. Floc'h & B. Kloareg, Tank cultivation of *Delesseria sanguinea* and preliminary analysis of the cell-wall polysaccharides. Poster.
- P. Potin, J.Y. Floc'h, C. Augris & J. Cabioch, Annual growth rate of the calcareous red alga *Lithothamnion corallioïdes* (Corallinales, Rhodophyta) in the bay of Brest, France. Contributed paper.
- **IIIrd International Workshop on Plant Polysaccharides, Structure and Function**. Le Croisic, 19-21 September 1990.  
P. Potin, A. Sanseau, Y. Le Gall, C. Rochas & B. Kloareg, Isolation of carrageenases from a marine *Cytophaga*-like bacterium. Poster.
- **International Marine Biotechnology Conference**, Baltimore, October, 1991.  
P. Potin, T. Barbeyron, F.Y. Bouget, C. Rochas & B. Kloareg, Biochemical characterization and molecular cloning of galactan hydrolases from marine bacteria. Invited paper.
- **XIV th International Seaweed Symposium**, Brest-StMalo, 16-21 August 1992.  
Potin P., Richard C., Rochas C. Lahaye, M. & Kloareg B. Purification of specific agarases from marine bacteria and characterization of novel oligosaccharides from agarose. Contributed paper.
- **XIVth Meeting of the Federation of European Connective Tissue Societies** 30/08-3/09/94-Lyon: 1991  
P. Potin, J.C. Yvin & B. Kloareg Biodegradation of extracellular matrix sulfated polysaccharides from red algae. Poster
- **Colloque de la Société de Physiologie Végétale**, 12-14/10/94, St Malo. Poster : P. Potin, T. Barbeyron, A. Gérard & B. Kloareg Preliminary characterization of galactan hydrolases from marine red algae and comparison with marine bacteria. Plant Sciences 1994, Y. de Kouchkovsky and F. Lahrer, eds.
- **XVth International Seaweed Symposium**, January 8-14 1995, Valdivia, Chili, Invited paper: P. Potin, A. Gérard, C. Richard, C. Rochas & B. Kloareg. Enzymes as tools for the structural analysis of algal polysaccharides.
- **Ist European Phycological Congress**, august 11-18 1996, Cologne, Allemagne, Contributed paper : K. Bouarab, P. Potin, J.A. Correa & B. Kloareg  
Highly sulfated oligocarrageenans elicit specific protein neosynthesis in *Acrochaete operculata*.
- **VIth International Phycological Congress**, august 9-16 1997, Leiden, Pays-Bas, Invited paper : P. Potin, F. Corellou, F.-Y. Bouget, C. Brownlee, M. McCann & B. Kloareg, Cell wall assembly and function in brown algae.
- **Vth Workshop PR proteins**, Aussois, march 1998, Poster: K. Bouarab, P. Potin, J.A. Correa & B. Kloareg, Sulfated oligosaccharides mediate a cross-talk between the red alga *Chondrus crispus* and its green algal pathogenic endophyte *Acrochaete operculata*.
- **Current Approaches in Basic and Applied Phycology** (atelier FONDAP-CNRS), Las Cruces, 7-11 décembre 1998 (conférencier invité).Bouarab, K., Kloareg, B., Correa, J.A. and Potin, P. 1998. Ecological and biochemical basis of algal infectious diseases
- **FEBS 99 26th Meeting of the Federation of European Biochemical Societies**. Nice, June 19-24, 1999. Poster: K. Bouarab, P. Potin, J.A. Correa & B. Kloareg, Sulfated oligosaccharides mediate a cross-talk between the red alga *Chondrus crispus* and its green algal pathogenic endophyte *Acrochaete operculata*.
- **2nd European Phycological Congress**, Montecatini, Italie, 20-26 septembre 1999 (communication). Leblanc C. Küpper, F. Potin P. & Kloareg, B. Defence mechanisms and halogen metabolism in brown algae.
- **Vth Latin-American Phycological congress** 21-26 novembre 1999, Puerto-Varas, Chili (lecture plenière). Bouarab, K. Kloareg, B., Correa, J. & Potin P., - 1999. The *Chondrus crispus*- *Acrochaete operculata* host-pathogen association, a novel model in glycobiology.
- **Colloque général de la Société de Physiologie Végétale**, 5-7/12/2000, Besançon. Poster : Bouarab K., Weinberger, F., Pohnert, G., Kloareg B. & Potin P. (2000) Resistance to *Acrochaete operculata* is associated with the activation of phenylpropanoid metabolism in the marine red alga *Chondrus crispus*.
- **XVIIème International Seaweed Symposium**, Cape Town, Afrique du Sud. (janvier 2001). Küpper F., Leblanc C., Colin C., Baker A., Carpenter L., Malin G., Kloareg B. & Potin P. Pathogen recognition and defense mechanisms in Laminariales. Conférence sur invitation.
- **10th International Congress on Molecular Plant-Microbe Interactions**. Madison, U.S.A. July 10-14, 2001. Invited paper: B. Kloareg, K. Bouarab, F. Adas, G. Pohnert, J.-P. Salaün & P. Potin. Biochemical bases of marine plant-microbe interactions : novel evidence on the evolution of plant immunity.
- **Atelier Lipides de la Société de Physiologie Végétale**, 7-10/07/2001, Strasbourg, Poster : Bouarab K. , Adas F., Salaun J.-P., Kloareg B. & Potin, P.  
Induction des voies des lipoxygénases chez l'algue rouge *Chondrus crispus* en réponse aux éliciteurs de défense.
- **VIIth International Phycological Congress**, august 9-16 2001, Thessalonikii, Grèce, Invited paper : Bouarab K., Weinberger F., Fiechter, V., Correa, J., Kloareg B., Potin P. Cell-cell recognition and signal transduction in the *Chondrus crispus*-*Acrochaete operculata* association.

**3rd European Phycological Congress**, Belfast, Irlande, August 2003.

- Colin C., Leblanc C., Wagner E., Delage L., Leize-Wagner E., Van Dorsselaer A., Kloareg B. and Potin P. Poster : The brown algal kelp *Laminaria digitata* features distinct bromoperoxidase and iodoperoxidase activities. Weinberger F., Pohnert G., Kloareg B., & Potin P. Invited communication. A signal released by an endophytic attacker acts as a substrate for a rapid defensive reaction of the red alga *Chondrus crispus*. Gaquerel, E., Bouarab, K., Potin, P. and Salaün, J-P., Poster."Elicitors induce oxylipins synthesis in the red alga *Chondrus crispus*".

**5ème Colloque Général de la Société Française de Physiologie Végétale** Leblanc C., Colin C., Delage L., Kloareg B. and Potin P. (2003). Poster : Haloperoxidases in the brown alga *Laminaria digitata*. Poster au, Gif/Yvette, France.

**Workshop, Perspectives in Marine Bioadhesives Engineering:** Invited speaker: Mimicking Marine Bioadhesives towards Novel Applications. 4/09, 2003, Brussels. Communication : Potin P., Cross-linking mechanisms of algal polymers.

**XVIIIème International Seaweed Symposium, Bergen, Norway.** (juin 2004).

Colin C., Leblanc C., Berglin M., Delage L., Elwing, H & Potin P. Communication orale :Vanadadium-haloperoxidases mediate the cross-linking of brown algal polyphenolics : implications for algal adhesion.

Weinberger F, Leonardi P, Kloareg B & Potin P. Communication orale

Agar oligosaccharides trigger distinct responses in two closely related red algae, *Gracilaria conferta* and *G. chilensis*

**49th International Conference on the Bioscience of Lipids** ; Ajaccio, France 20-24 sept.2005

E. Gaquerel, K. Bouarab, P. Potin, J.P. Salaün ; Defense elicitors induce oxylipin synthesis in the red alga *Chondrus crispus*

**International Phycological Congress, Durban, South Africa**, 13-19 August 2005. Invited speaker

Potin, P. Colin, C., Wagner, E., Delage, L., Berglin, M., Elwing, H & Leblanc, C.- Integration of molecular biology and chemical approaches for understanding cross-linking mechanisms in brown algal adhesion.

**19th European Conference on Biomaterials Sorrento, Italy** - September 11-15 2005. Poster 114 597: Algal Polymers as Potential Soft Tissue Adhesives. Havazelet Bianco-Peled, Ronit Biton, Maya Ben-Yehuda, Philippe Potin, Carole Colin.

**2nd Int. Conf. on Nonmammalian Eicosanoids, Bioactive Lipids & Plant Oxylipins, Berlin, 24-27. May 2006,** Invited speaker Gaquerel, E., Hervé, C., Bouarab K., Boyen, C., Salaün J-P. & Potin P. New insights on the defensive function of octadecanoid and eicosanoid oxylipins in marine red algae.

**XV Congress of the Federation of European Society of Plant Biology. Lyon Juillet 2006:** A. Ritter, C. Henriquez, S. Goulitquer, JP. Salaün, T. Tonon, J. Correa and P. Potin - Affiche-“Physiological and molecular response of the brown alga *Laminaria Digitata* in reaction to copper stress”

**3rd GERLI Lipidomics Meeting "From Lipid Analysis to Genetic Disorders" Marseille Mai 2006:**

“Mapping Oxylipids in Biological Samples” S. Goulitquer, E. Gaquerel, A. Ritter, D. Lucas & P. Potin

**EUROBIC8 8th European Biological Inorganic Chemistry Conference 2-6 JULY 2006**, Communication orale.

Feiters MC, Leblanc C, Michel G, Potin P, Küpper FC, Meyer-Klaucke W, Kostenko AV, Soldatov AV, V, I, and Br X-ray Absorption Spectroscopic Studies of Haloperoxidase

**4th European Phycological Congress**, Oviedo, Spain, August 2007 **Présentation orale.** Verhaeghe EF, Fraysse A, Guerquin-Kern JL, Wu TD, Devès G, Mioskowski C, Leblanc C, Ortega R, Ambroise Y, Potin P. Micro-chemical imaging of iodine distribution in the brown alga *Laminaria digitata* suggests a new mechanism for its accumulation.

**Congrès de la Société Phycologique de France - ALGIMAC – 9-10 decembre 2008-** Concarneau (France)

Présentation orale : Cosse A., Thomas F., Goulitquer S., Leblanc C., Potin P. (2008). Potentialisation des réponses de défense de l'algue brune *Laminaria digitata*..

**Seaweed Research Symposium - 22nd January 2009 Galway** (Ireland) Invited speaker Philippe Potin, Challenges in the Optimised Production of Bioactives from Kelp -

**International Meeting-Regulatory oxylipins, Lausanne, Suisse, 3-6 juin 2009.** Invited speaker : Sophie Goulitquer, Jean-Pierre Salaün Andrès Ritter, François Thomas, Audrey Cosse, Thierry Tonon, Catherine Leblanc, Philippe Potin. Aldehyde Release By Brown Algal Kelps..

**14th International Conference on X-Ray Absorption Fine Structure (XAFS14) Camerino (ITALY) July 26-31, 2009.** Communication orale Feiters MC, Meyer-Klaucke W, Kostenko AV, Soldatov AV, Leblanc C, Michel G, Potin P, Küpper FC, Hollenstein K, Locher KP, Bevers LE, Hagedoorn P-L, Hagen WR, 2009: Anion binding in biological systems

**4th GERLI Lipidomics Meeting - Rennes Juillet 2009** Invited speaker Goulitquer S, Ritter A, Tonon T, Salaün J-P & Potin P Oxylipin structure and function in response to stress in marine brown algae.

**9ème International Phycological Congress-Tokyo ( Japon ) Aout 2009.** Invited speaker Chemical ecology session.: F Thomas , A Cosse, S Goulitquer, S Raimund, C Leblanc & P Potin. Probing the ecological significance of distance chemical signaling in kelps at the gene expression level.

**Rencontres de Biologie Marine Thalado Roscoff 20/08/2009** Conférence grand public sur la communication chimique chez les laminaires. P. Potin : "Les petits potins des algues".

**Seaweeds. for Human Consumption, Bioactive Compounds, and Combating of Diseases,** An international interdisciplinary symposium Carlsberg Academy, Copenhagen, August 26-27, 2010. Potin P. Algal genomics may offer new insights into seaweed uses

\*Potin P., Boudry P, Boyen C., Champenois J., M. Cock, Czjzek M., Frangoudes K., Laurans M., Leblanc C., Valero M., Sassi J.-F., Siegel A., Tonon T.(2012). IDEALG, a long term national integrative project to capitalize on the recent breakthroughs in algal genomics to develop agronomy, biotechnology and chemistry from seaweed bio-resources. British Phycological Society annual winter meeting - January 4-6th 2012, Newcastle,UK.

\*Potin P (2013) Biosynthesis and functions of phlorotannins in the brown alga *Ectocarpus*: how functional genomics revolutionizes our understanding of algal metabolism and defense mechanisms.

Quingdao\_Sino-German symposium on algae kicked off on the Yushan campus of Ocean University of China (OUC) on March 21, 2013.

\*Potin P (2013) XXIème International Seaweed Symposium, ISS Bali, Indonesia. (avril 2013).

Genomics and post-genomics approaches to gain new insights into seaweed agricultural uses.

\*Potin P (2013) XXIth ISS Bali 2013 Biotic interactions of kelps and phycopathology, what is known and what is next ?

\*Potin P (2014) 2014 Wando International Marine Algal Symposium (Seaweeds for Future Industry) (16-19 avril 2014, Wando, South Korea) Pattern-triggered immunity (PTI) in red and brown seaweeds and management of disease resistance.

(\*) Conférencier invité Ph. Potin

#### **Administration de contrat (10 dernières années)**

**2017--2020.** EU H2020-Blue Growth : GENIALG, Coordinateur scientifique

**2011 – 2019.** Programme Investissements d'avenir, IDEALG, Coordinateur scientifique.

**2005 – 2008.** Programme national inter-organismes TOXNUC-E. project « IODE » coordinateur

**2001 – 2005.** EU FP5-GROWTH : Algal Bioadhesives

**2001 – 2005.** EU FP5 INCO6DEV2 EPIFIGHT. Coordinateur pour le rapport final.

**2000 – 2001.** Programme National Biodiversité, Interactions Durables : co-coordinateur

#### **Autres activités**

**2012- 2014** Représentant français dans le Conseil de la Federation of European Phycological societies (FEPS)

**2009-** Membre du Conseil de la Société phycologique de France, depuis jan. 2009.

**2008-2012** Membre élu pour 4 ans de la "Section 28" (Biologie Végétale Intégrative) du Comité National du CNRS.

**2006-2009** Membre de l'équipe d'Ingénierie et d'Animation du Pôle de Compétitivité Mer-Bretagne depuis septembre 2005, animateur Biotechnologies marines, fin de mandat janvier 2010.

**2003-2008** Membre de l'Editorial board *Botanica Marina*

**2005-2012** Représentant du CNRS au Conseil scientifique du Conservatoire Botanique National de Brest.

#### Arbitre pour les revues

***Plant Physiology, PlosOne, Marine Drugs, Phytochemistry, Journal of Phycology, European Journal of Phycology, Journal of applied Phycology, Plant Science , Botanica Marina, Marine Biotechnology, Plant Cell Physiology, Plant Cell & Environment.***