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Academic honours and career

- 2003- : Professor, ISMER, Université du Québec à Rimouski.
- 2003-2013 : Canada Research Chairs in Aquaculture, Level 2.
- 2002-2003 : R&D director of aquaculture funds for the Société de développement de l'Industrie Maricole du Québec.
- 1999-2002 : Associate professor to Université du Québec à Rimouski.
- 1997-1999: Postdoc researcher, Department of Biology, Université Laval (Québec), Canada.
- 1992-1996 : PhD Biology, Université Laval (Québec), Canada, 'Analyse bioénergétique de la susceptibilité à la mortalité estivale chez deux populations de moules d'élevage, *Mytilus edulis*'.

Experience

- Scientific projects from 2007 to 2013: leader and co-leader of 38 projects funded by NSERC, FRQNT, MDEIE, PCRDA, Research Council of Norway and MAPAQ.
- Supervision from 2007 to 2013: 2 postdoctoral fellows, 15 PhD and 16 MSc.
- Expertise: reviewer for scientific articles and grant proposals, organization of scientific symposia.

Main scientific expertise

Ecophysiology of marine invertebrate larvae, studying production of juveniles in aquaculture, research on marine bioactive molecules and developing more effective farming practices to limit impacts on natural populations.

List of publications (2007-2013)

1. Vagner, M., **de Montgolfier, B.** Sévigny, J-M., Tremblay, R., Audet, C. 2013. Effects of essential fatty acids on gene expression of winter flounder (*Pseudopleuronectes americanus*) in relation to metamorphosis processes. Online in Marine Biology.
2. **Girard, J.-M.**, Roy, M.-L., Ben Hafsa, M., Gagnon, J., Fauchoux, N., Heitz, M., Tremblay, R., Deschênes, J.-S. 2013. Mixotrophic cultivation of green microalgae *Scenedesmus obliquus* on cheese whey permeate for biodiesel production. Accepted in Algal Research.
3. Gendron, L., R. Tremblay, S. Belvin, **B. Genard**, S. Motnikar, J. Côté. 2013. Condition, survival and growth in situ of hatchery-reared stage IV lobster (*Homarus americanus*) fed Artemia and lipid-rich wild zooplankton. *Aquaculture* 416–417 (2013) 380–389.
4. Dupont-Prinet, A., **Pillet, M.**, Chabot, D., Hansen, T., Tremblay, R., Audet, C. 2013. Northern shrimp (*Pandalus borealis*) oxygen consumption and metabolic enzyme activities are severely constrained by hypoxia in the Estuary and Gulf of St. Lawrence. *Journal of Experimental Marine Biology and Ecology* 448:298-307.
5. **Girard, J.-M.**, Deschênes, J.-S., Tremblay, R., Gagnon, J. 2013. FT-IR/ATR Univariate and multivariate calibration models for in situ monitoring of sugars in complex microalgal culture media. *Bioresource Technology* 144: 664-668.
6. **Perez, V.**, Olivier, F., Tremblay, R., Neumeier, U., Thébault, J., Chauvaud, L., Meziane, T. 2013. Trophic resources of the bivalve, *Venus verrucosa*, in the Chausey archipelago (Normandy, France) determined by stable isotopes and fatty acids. *Aquatic Living Resources* 26(3): 229-239.

7. **Hennebicq, R.**, Fabra, G., Pellerin, C., Marcotte, I., Myrand, B. et Tremblay, R. 2013. The effect of cultured mussels (*Mytilus edulis*) spawning on mechanical properties, chemical and biochemical composition of byssal threads. *Aquaculture* 410–411: 11–17.
8. **Genard, B.**, P. Miner, J.-L. Nicolas, D. Moraga, P. Boudry, F. Pernet, R. Tremblay. 2013. Integrative study of physiological changes associated with bacterial infection in Pacific oyster larvae. *PLOS ONE* 8(5): e64534.
9. **St-Onge, P.**, Sévigny, J.-M., Strasser, C., Tremblay, R., 2013. Strong population differentiation of softshell clams (*Mya arenaria*) sampled across seven biogeographic marine ecoregions: possible selection and isolation by distance. *Marine Biology* 160:1065–1081.
10. **Seychelles, L.H., Doiron, K.**, Audet, C., Tremblay, R., Pernet, F., Lemarchand, K., 2013. Impact of arachidonic acid enrichment of live rotifer prey on bacterial communities in rotifer and larval fish cultures. *Canadian Journal of Microbiology* 59(3):189-196.
11. Vagner, M., **de Montgolfier, B.** Sévigny, J.-M., Tremblay, R., Audet, C. 2013. Expression of genes involved in key metabolic processes during winter flounder (*Pseudopleuronectes americanus*) metamorphosis. *Canadian Journal of Zoology* 91: 156–163.
12. Arnold, A., F. Byette, **M.-O. Seguin-Heine**, A. Leblanc, S. Lekha, R. Tremblay, C. Pellerin, I. Marcotte. 2013. Solid-state NMR structure determination of whole anchoring threads from the blue mussel *Mytilus edulis*. *Biomacromolecules* 14: 132-141.
13. **Tardy-Laporte, C.**, Arnold, A.A., Génard, B., Gastineau, R., Morançais, M., Mouget, J.-L., Tremblay, R., Marcotte, I. 2013. A 2H solid-state NMR study of the effect of antimicrobials on intact non-mutated *Escherichia coli*. *Biochimica et Biophysica Acta (BBA) - Biomembranes* 1828: 614-622.
14. **Gagné, R.**, R. Tremblay, F. Olivier, F. Pernet, P. Miner, J.-F. Samain. 2012. Effect of diet on detachment of scallop *Pecten maximus* post-larvae due to flow velocity. *Aquaculture*. 370-371: 172-178.
15. **Toupoint, N.**, Mohit, V., Linossier, I., Bourgougnon, N., Myrand, B., Lovejoy, C., Olivier, F., Tremblay, R., 2012. Effect of the biofilm age on *Mytilus edulis* settlement. *Biofouling* 28:985-1001.
16. Deschênes, J.-S., **St-Onge, P.**, Collin, J.-C., Tremblay, R., 2012, Extremum seeking control of batch cultures of microalgae *Nannochloropsis oculata* in pre-industrial scale PBRs. *International Federation of Automatic Control (IFAC)* 8(1): 585-590.
17. **Mejri, S.**, Tremblay, R., Lambert, Y., Audet, C. 2012. Influence of different levels of dissolved oxygen on the success of Greenland halibut (*Reinhardtius hippoglossoides*) egg hatching and embryonic development. *Marine Biology* 159: 1693-1701.
18. **Genard, B.**, R. Tremblay, F. Pernet, D. Élise, P. Boudry, D. Moraga. 2012. Expression of candidate genes related to metabolism, immunity and cellular stress during massive mortality in the American oyster *Crassostrea virginica* larvae in relation to biochemical and physiological parameters. *Gene* 499 : 70-75.
19. Leblanc, A., A. Arnold, **B. Genard**, J.-B. Nadalini, **M.-O. Seguin-Heine**, I. Marcotte, R. Tremblay, L. Sleno. 2012. Determination of isotopic labeling of proteins by precursor ion scanning liquid chromatography tandem mass spectrometry of derivatized amino acids applied to nuclear magnetic resonance studies. *Rapid Communication in Mass Spectrometry* 26: 1165-1174.
20. **Toupoint, N.**, **Gilmore-Solomon, L.**, Bourque, F., Myrand, B., Pernet, F., Olivier, F., Tremblay, R. 2012. Match/mismatch between larval supply of *Mytilus edulis* and seston quality: incidence on recruitment. *Ecology* 93(8): 1922-1934.
21. Myrand, B., L. Chevarie, R. Tremblay. 2012. Benthic spat collection of soft-shell clams (*Mya arenaria* Linnaeus, 1758) using mats. *Journal of Shellfish Research* 31(1): 39–48.
22. Tremblay, R., Landry, T., Leblanc, N., Pernet, F., Barkhouse, C., Sévigny, J.-M. 2011. Physiological and biochemical indicator of mussel seeds quality. *Aquatic Living Ressources* 24: 273–282.
23. **Lachance, A.-A., Hennebicq, R.**, Myrand, B., Sévigny, J.-M., Kraffe, E., Marty, Y., Marcotte, I., Tremblay, R. 2011. Biochemical and genetic characteristics of suspension-cultured mussels (*Mytilus edulis*) in relation to byssal thread production and losses by fall-off. *Aquatic Living Ressources* 24:283-293.
24. **Genard, B.**, F. Pernet, K. Lemarchand, P. Boudry, D. Moraga, R. Tremblay. 2011. Physiological and biochemical changes during premetamorphic development in American oyster *Crassostrea virginica* in relation to the microbial environment and mortality. *Aquatic Living Ressources* 24: 247-260.

25. Barker, F.K., Bell, J.J., Bogdanowicz, S.M., Bonatto, S.L., Cezilly, F., Collins, S.M., Dubreuil, C., Dufort, M.J., Eraud, C., Fuseya, R., Heap, E.A., Jacobsen, N., Madders, M., McEwing, R., Michel, A.P., Mougeot, F., Ogden, R.S., Orantes, L.C., Othman, A.S., Parent, É., Pulido-Santacruz, P., Rioux-Paré, R., Roberts, M.F., Rosazlina, R., Sakamoto, T., De-Leon P.S., Sévigny, J.-M., **St-Onge, P.**, Terraube, J., Tingay, R.E., Tremblay, R., Watanabe, S. & Wattier, R.A. (2011) Permanent Genetic Resources added to Molecular Ecology Resources Database 1 June 2011–31 July 2011. *Molecular Ecology Resources* 11: 1124-1126.
26. **Pariseau, J.**, P., McKenna, P., AboElkhair, M., Saint-Louis, R. Pelletier, É. Davidson, J.T., Tremblay, R., Berthe, F.C.J., Siah, A. 2011. Effects of pesticide compounds (chlorothalonil and mancozeb) and benzo [a] pyrene mixture on aryl hydrocarbon receptor, p53 and ubiquitin gene expression levels in haemocytes of soft-shell clams (*Mya arenaria*). *Ecotoxicology* 20: 1765–1772.
27. Pérez, H.M., K.B. Brokordt, R. Tremblay, H.E. Guderley. 2011. Allozyme heterozygosity and escape response performance of the scallops, *Argopecten purpuratus* and *Placopecten magellanicus*. *Marine Biology* 158:1311–1318.
28. Audet, C. et Tremblay, R. 2011. Flounder production in eastern North America: biological issues. *Canadian Journal of Zoology*. *Canadian Journal of Zoology* 89, 612-621.
29. Fraboulet, E., Lambert, Y., Tremblay, R., Audet, C. 2011. Growth and lipid composition of winter flounder juveniles reared under natural and fixed photoperiod and temperature conditions. *North American Journal of Aquaculture*. 73(2): 89-96.
30. **Seychelles, L.H.**, Audet, C., Tremblay, R., Lemarchand, K., Pernet, F. 2011. Bacterial colonization of winter flounder *Pseudopleuronectes americanus* fed live feed enriched with three different commercial diets. *Aquaculture Nutrition*. 17: e196–e206.
31. **Rayssac, N.**, Pernet, F., Lacasse, O., Tremblay, R. 2010. Temperature effect on first stages development of coexisting mussel species, *Mytilus edulis* (Linnaeus, 1758) and *M. trossulus* (Gould, 1850). *Marine Ecology Progress Series* 417: 183-191.
32. **Gagné, R.**, R. Tremblay, F. Pernet, P. Miner, J.-F. Samain, F. Olivier. 2010. Lipid requirements of the scallop *Pecten maximus* (L.) during larval and post-larval development in relation to addition of *Rhodomonas salina* in diet. *Aquaculture* 309:212-221.
33. Redjah, I., F. Olivier, R. Tremblay, B. Myrand, F. Pernet, U. Neumeier and L. Chevarie. 2010. The importance of turbulent kinetic energy on transport of juvenile clams (*Mya arenaria*). *Aquaculture* 307:20-28.
34. Fraboulet, E., Lambert, Y., Tremblay, R., Audet, C. 2010. Assessment of the physiological cost of metamorphosis and paternal effect on growth of young winter flounder juveniles in a cold environment. *Journal of Fish Biology* 76: 930–948.
35. Myrand, R. Tremblay, J.-M. Sévigny. 2009. Decrease in multi-locus heterozygosity in suspension-cultured mussels (*Mytilus edulis*) through loss of the more heterozygous individuals. *Aquaculture* 295: 188-194.
36. Myrand, B., R. Tremblay, J.-M. Sévigny. 2009. Impact of suspension culture using mesh sleeves on genetic characteristics of *Mytilus edulis* L. in Canada. *Aquaculture* 291: 147-153
37. **Pariseau, J.** R. Saint-Louis, M. Delaporte, M.A. El Khair, P. McKenna, R. Tremblay, T.J. Davidson, E. Pelletier, F.C.J. Berthe. 2009. Potential link between exposure to fungicides chlorothalonil and mancozeb and haemic neoplasia development in the soft-shell clam *Mya arenaria*: A laboratory experiment. *Marine Pollution Bulletin* 58: 503-514.
38. **Seychelles, L.H.**, C. Audet, R. Tremblay, R. Fournier, F. Pernet. 2009. Essential fatty acid enrichment of cultured rotifers (*Brachionus plicatilis*) using frozen-concentrated microalgae. *Aquaculture Nutrition* 2009 15; 431–439.
39. Kraffe, E., R. Tremblay, S. Belvin, J.-R. LeCoz, Y. Marty et H. Guderley. 2008. Effect of reproduction on escape responses, metabolic rates and muscle mitochondrial properties in the scallop *Placopecten magellanicus*. *Marine Biology* 156: 25-38.
40. **Burke, K.**, E. Bataller, G. Miron et R. Tremblay. 2008. Larval quality of a non-native bivalve species (European oyster, *Ostrea edulis* L.) off the east Canadian coast. *Journal of Shellfish Research* 27: 701-710.
41. **Trottet, A.**, S. Roy, E. Tamigneaux, C. Lovejoy et R. Tremblay. 2008. Impact of suspended mussels (*Mytilus edulis* L.) on plankton communities in a Magdalen Islands lagoon (Québec, Canada): A mesocosm approach. *Journal of Experimental Marine Biology and Ecology* 365: 103–115.

- 42. Parent, G.J.**, F. Pernet, R. Tremblay, J.-M. Sévigny et M. Ouellette. 2008. Remodeling of membrane lipids in gills of adult hard clam *Mercenaria mercenaria* during declining temperature. *Aquatic Biology* 3:101-109.
- 43. Delaporte, M.**, S. Synard, J. Pariseau, P. McKenna, R. Tremblay, J. Davidson et F.C.J. Berthe. 2008. Assessment of haemic neoplasia in different soft shell clam *Mya arenaria* populations from eastern Canada by flow cytometry. *Journal of Invertebrate Pathology* 98: 190–197.
- 44. LeBlanc, N.**, R. Tremblay, J. Davidson, T. Landry, M. McNiven. 2008 The effect of selection treatments on *Mytilus edulis* , modifications of genetic and physiological characteristics. *Marine Biology* 153: 1141-1152.
- 45. Lachance, A.-A.**, B. Myrand, R. Tremblay, V. Koutitonsky et E. Carrington. 2008. Biotic and abiotic influences on the attachment strength of blue mussel (*Mytilus edulis*) from suspended culture. *Aquatic Biology* 2 :119-129.
- 46. Pernet, F.**, R. Tremblay, **I. Redjha**, J.-M. Sévigny et C. Gionet. 2008. Physiological and biochemical traits correlate with differences in growth rate and temperature adaptation among groups of the eastern oyster *Crassostrea virginica*. *Journal of Experimental Biology* 211, 969-977.
- 47. Trottet, A.**, S. Roy, E. Tamigneaux, C. Lovejoy et R. Tremblay. 2008. Influence of suspended mussel farming on planktonic communities in Grande-Entrée Lagoon, Magdalen Islands (Québec, Canada). *Aquaculture* 276:91-102.
- 48. Belvin, S.**, R. Tremblay, M. Roussy et S.E. McGladdery. 2008. Inoculation experiments to understand mass mortalities in sea scallop, *Placopecten magellanicus*. *Journal of Shellfish Research* 27 : 251-260.
- 49. Pernet, F.** R. Tremblay, L. Comeau et H. Guderley. 2007. Temperature adaptation in two bivalve species from different thermal habitats: energetic and remodelling of membrane lipids. *Journal of Experimental Biology* 210: 2999-3014.
- 50. Tremblay, R.**, F. Olivier, E. Bourget, D. Rittschof. 2007. Physiological condition of *Balanus amphitrite* (Darwin) cyprid larvae determines habitat selection success. *Features articles, Marine Ecology Progress Series* 340:1-8.
- 51. Leblanc, N.**, J. Davidson, R. Tremblay, M. McNiven et T. Landry. 2007. The effect of anti-fouling treatments for the clubbed tunicate on the blue mussel, *Mytilus edulis*. *Aquaculture* 264: 205-213.
- 52. Tremblay, R.**, S. Cartier, P. Miner, F. Pernet, C. Quéré, J. Moal, M.-L. Muzellec, M. Mazuret et J.-F. Samain. 2007. Effect of *Rhodomonas salina* addition to a standard hatchery diet during the early ontogeny of the scallop *Pecten maximus*. *Aquaculture* 262 : 410-418.

Total : 82 articles in peer-reviewed journals, 1 book chapter, 2 patents.