

1. EDUCATION:

- 1976 – 1980 :** B.Sc. (Chemistry), April, 1980, Collège St-Louis Maillet, Edmundston, NB (1976 - 1977) et Université de Moncton, Moncton, NB (1977 - 1980)
- 1980 – 1986:** Ph.D. (Chemistry), March 1986, Université de Sherbrooke, Sherbrooke, Québec
- 1988 – 1989:** Post-Doctoral stay at CHUL, Endocrinologie Moléculaire, Ste-Foy, Québec with Dr. Fernand Labrie
- 1986 – 1987:** Post-Doctoral stay at Memorial University of Newfoundland, Department of Chemistry, St. John's, NF with Professor Alex G. Fallis

2. ACADEMIC, RESEARCH AND INDUSTRIAL EXPERIENCE

- June, 2007 – :** Professor, Organic Chemistry, Département de chimie, biochimie et physique, UQTR, Trois-Rivières, Québec, G9A 5H7
- Sept. 2018 – :** President, TriOnco Inc. (10828882 CANADA INC), 355 rue Peel, Bureau 503, Montréal QC H3C 2G9
- July, 1993 – May 2007:** Associate Professor, Organic Chemistry. Département de chimie-biologie, UQTR, Trois-Rivières, Québec, G9A 5H7
- Oct. 2003 – Dec., 2012:** President, BioEureka Pharma Inc., 5330 J.H. Fortier, Trois-Rivières, Québec, G8Y 4Z4
- Jan., 2004 – Dec., 2005:** Consultant, Intellectual property, Procyon Biopharma Inc., Dorval
- May, 2003 – Dec., 2003:** Director, Intellectual Property, Procyon Biopharma Inc., Dorval
- Jan., 2001– April, 2003:** Director, Intellectual Property, Pharmacor Inc., Laval, Québec, H7V 3S8
- Jan., 2000 – Dec., 2000:** Scientific Visitor, Pharmacor Inc., Laval, Québec, H7V 3S8
- June, 1990 – June, 1993:** Assistant Professor, Medicinal Chemistry. School of Pharmacy, Memorial University of Newfoundland, Health Sciences Centre, St. John's, NF, A1B 3V6
- July, 1989 – May, 1990:** Medical Researcher with Professor C.H.J. Ford, Oncology Research, Memorial University of Newfoundland, Health Sciences Centre, St. John's, NF, A1B 3V6

3. PUBLICATIONS**3.1 Manuscript submitted**

1. A. Paquin, C. Reyes-Moreno and **G. Bérubé**. Recent advances in the use of the dimerization strategy as a mean to increase the biological potential of natural or synthetic molecules. Published April, 2021

3.2 Manuscripts published (2015-2021 = 26)

1. P. Chanphai, F. Cloutier, C. Reyes-Moreno, **G. Bérubé** and H.A. Tajmir-Riahi. Locating the binding sites of two aminobenzoic acid derivatives on tRNA: Drug binding efficacy and RNA structure, Journal of Biomolecular Structure & Dynamics, In press. <https://doi.org/10.1080/07391102.2020.1808076>
2. P. Chanphai, F. Cloutier, C. Reyes-Moreno, **G. Bérubé** and H.A. Tajmir-Riahi. Binding efficacy of aminobenzoic acid derivatives with DNA duplex: Drug binding sites and DNA structure and dynamics, Journal of Biomolecular Structure & Dynamics, In press. <https://doi.org/10.1080/07391102.2020.1740792>
3. P. Chanphai, F. Cloutier, Y. Oufqir, M.-F. Leclerc, A.M. Eiján, C. Reyes-Moreno, **G. Bérubé** and H.A. Tajmir-Riahi. Biomolecular study and conjugation of two *para*-aminobenzoic acid

- derivatives with serum proteins: drug binding efficacy and protein structural analysis. 39(1), 79-90 (2021). <https://doi.org/10.1080/07391102.2020.1719889>
4. J. Girouard, D. Belgorosky, J. Hamelin-Morrisette, V. Boulanger, E. D'orio, D. Ramla, R. Perron, L. Charpentier, A.-M. Eiján, G. Bérubé and C. Reyes-Moreno. Molecular therapy with derivatives of amino benzoic acid inhibits tumor growth and metastasis in murine models of bladder cancer through inhibition of TNF α /NF κ B and iNOS/NO pathways. *Biochemical Pharmacology*, 176, June 2020, 113778, 1-15. <https://doi.org/10.1016/j.bcp.2019.113778>
 5. P. Chanphai, J. Bariyanga, **G. Bérubé** and H.A. Tajmir-Riahi, Complexation of cis-Pt and trans-Pt(NH $_3$) $_2$ Cl $_2$ with serum proteins: A potential application for drug delivery, *Journal of Biomolecular Structure & Dynamics*. 38(9), 2777-2783 (2020). <https://doi.org/10.1080/07391102.2019.1654408>
 6. V. Ouellette, M.-F. Côté, R. C.-Gaudreault, H.-A. Tajmir-Riahi and G. Bérubé. Second-generation testosterone-platinum(II) hybrid molecules for site-specific treatment of androgen receptor positive prostate cancer: Design, synthesis and antiproliferative activity. *European Journal of Medicinal Chemistry*, 179, 660-666 (2019). <https://doi.org/10.1016/j.ejmech.2019.06.090>
 7. G. Bérubé, How to utilize academic research efforts in cancer drug discover. Invited Editorial Article. **Invited manuscript**. *Expert Opinion On Drug Discovery*, 14 (4), 331-334 (2019). <https://doi.org/10.1080/17460441.2019.1582637>
 8. P. Chanphai, V. Ouellette, S. Mandal, S. K. Mandal, G. Bérubé and H.A. Tajmir-Riahi, Location of multiple binding sites for testo and testo-Pt(II) with tRNA, *Journal of Biomolecular Structure & Dynamics*, 37 (16), 4133-4139 (2019). <https://doi.org/10.1080/07391102.2018.1541142>
 9. P. Chanphai, V. Ouellette, S. K. Mandal, G. Bérubé and H.A. Tajmir-Riahi, Testo and testo-Pt(II) bind DNA at different locations, *Chemico-Biological Interactions*. 296, 179-184 (2018). <https://doi.org/10.1016/j.cbi.2018.09.008>
 10. A. Singh, M.-A. Massicotte, A. Garand, L. Tousignant, V. Ouellette, G. Bérubé and I. Desgagné-Penix, Cloning and characterization of norbelladine synthase catalyzing the first committed reaction in Amaryllidaceae alkaloid biosynthesis. *BMC Plant Biology*, 18:338, pages 1-12 (2018). <https://doi.org/10.1186/s12870-018-1570-4>
 11. P. Chanphai, V. Ouellette, G. Bérubé and H.A. Tajmir-Riahi, Conjugation of testo and testo-Pt(II) with serum proteins: Loading efficacy and protein conformation. *International Journal of Biological Macromolecules*, 118, 1112-1119 (2018). <https://doi.org/10.1016/j.ijbiomac.2018.06.186>
 12. P. Chanphai, L. Bekale, S. Sanyakamdhorn, D. Agudelo, G. Bérubé, T. J. Thomas and H. A. Tajmir-Riahi, PAMAM dendrimers in drug delivery: Loading efficacy and polymer morphology. *Can. J. Chem.*, 95, 891-896 (2017). <https://doi.org/10.1139/cjc-2017-0115>
 13. P. Chanphai, G. Bérubé and H.-A. Tajmir-Riahi. Review on testosterone delivery by natural and synthetic nanoparticles. *J. Nanomed. Res.* 5(2): 00111 (2017). [10.15406/jnmr.2017.05.00111](https://doi.org/10.15406/jnmr.2017.05.00111)
 14. P. Chanphai, D. Agudelo, A.-R. Vesper, G. Bérubé and H.-A. Tajmir-Riahi. Testosterone and its dimers alter tRNA morphology. *Journal of Pharmaceutical and Biomedical Analysis*, 134, 269-274 (2017)
 15. P. Chanphai, D. Agudelo, A.-R. Vesper, G. Bérubé and H.-A. Tajmir-Riahi. Effect of testosterone and its aliphatic and aromatic dimers on DNA morphology. *International Journal of Biological Macromolecules*, 95, 850-855 (2017)

16. A.-R. Vesper, J. Lacroix, R. C.-Gaudreault, H.-A. Tajmir-Riahi and G. Bérubé. Synthesis of novel C₂-symmetric testosterone dimers and evaluation of antiproliferative activity on androgen-dependent and -independent prostate cancer cell lines. *Steroids*, **115**, 98-104 (2016)
17. P. Chanphai, A.-R. Vesper, J. Bariyanga, G. Bérubé and H.-A. Tajmir-Riahi, Review on the steroid delivery by carrier proteins, *Journal of Photochemistry and Photobiology B: Biology*, **161**, 184-191 (2016)
18. D. Agudelo, G. Bérubé and H.-A. Tajmir-Riahi, An overview on the delivery of antitumor drug doxorubicin by carrier proteins. *International Journal of Biological Macromolecules*, **88**, 354-360 (2016)
19. D. Agudelo, P. Bourassa, G. Bérubé and H. A. Tajmir-Riahi, Review on the binding of anticancer drug doxorubicin with DNA and tRNA: Structural models and antitumor activity. *Journal of Photochemistry and Photobiology B: Biology*, **158**, 274-279 (2016)
20. G. Bérubé. An overview of molecular hybrids in drug discovery. **Invited manuscript**. *Expert Opinion On Drug Discovery*, **11** (3), 281-305 (2016)
21. I. G. Denisov, P. J. Mak, Y. V. Grinkova, D. Bastien, G. Bérubé, S. G. Sligar and J. R. Kincaid. The use of isomeric testosterone dimers to explore allosteric effects in substrate binding to cytochrome P450 CYP3A4, *Journal Inorganic Biochemistry*, **158**, 77-85 (2016)
22. C. Descôteaux, K. Brasseur, V. Leblanc, É. Asselin and G. Bérubé. Exploring the synthesis and anticancer potential of L-tyrosine-platinum(II) hybrid molecules. *Medicinal Chemistry*, **11**(8), 717-724 (2015)
23. P. Chanphai, A.-R. Vesper, L. Bekale, G. Bérubé and H. A. Tajmir-Riahi. Transporting testosterone and its dimers by serum proteins. *Journal of Photochemistry and Photobiology B: Biology*, **153**, 173-183 (2015)
24. J. Hamelin-Morrisette, S. Cloutier, J. Girouard, D. Belgorosky, A.M. Eiján, J. Legault, C. Reyes-Moreno and G. Bérubé, Identification of an anti-inflammatory derivative with anti-cancer potential: The impact of each of its structural components on inflammatory responses in macrophages and bladder cancer cells, *European Journal of Medicinal Chemistry*, **96**, 259-269 (2015)
25. P. Chanphai, A.-R. Vesper, L. Bekale, G. Bérubé and H. A. Tajmir-Riahi, Encapsulation of testosterone and its aliphatic and aromatic dimers by milk beta-lactoglobulin. *International Journal of Biological Macromolecules*, **76**, 153-160 (2015)
26. N. Morin, J. Bruneau, S. Fortin, K. Brasseur, V. Leblanc, É. Asselin and G. Bérubé. New testosterone derivatives as semi-synthetic anticancer agents against prostate cancer: synthesis and preliminary biological evaluation. *Medicinal Chemistry*, **11**(6), 531-539 (2015)

4. COMMUNICATIONS (2015 – 2021 = 35)

5. PATENTS (12 granted, 1 submitted – during career)

The most recent patents are directly linked to this grant application: Gervais Bérubé and Carlos Reyes-Moreno. *Aminobenzoic acid derivatives for use as antiinflammatory agents, anti-metastatic agents and/or anticancer agents*. The US patent (No. **10,759,754**, 1/09/2020) and the international patent (**EP 3 442 943 B1**) are granted. The latter patent will soon be validated in three countries: France, Germany and Great Britain.

6. INVITED SPEAKER (2015 – 2021 = 5)

7. INTERRUPTIONS – n/a