Christopher J. Wilds, B.Sc. (Concordia), Ph.D. (McGill)

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CURRENT POSITION:

07/2019 - present **Professor**
Department of Chemistry and Biochemistry
Concordia University, Montréal, Canada

EDUCATION:

01/1996 - 12/1999 **Doctor of Philosophy in Chemistry**
McGill University, Montréal, Canada
09/1991 - 12/1994 **Bachelor of Science in Chemistry**
Concordia University, Montréal, Canada

PROFESSIONAL EXPERIENCE (CHEMISTRY):

07/2008 - 06/2019 **Associate Professor**
Department of Chemistry and Biochemistry
Concordia University, Montréal, Canada
07/2003 - 06/2008 **Assistant Professor**
Department of Chemistry and Biochemistry
Concordia University, Montréal, Canada
02/2002 - 06/2003 **Postdoctoral Fellow**
Department of Biochemistry, Bloomberg School of Public Health
Johns Hopkins University, Baltimore, Maryland
Supervisor: Prof. Paul S. Miller
08/2000 - 01/2002 **Postdoctoral Fellow**
Department of Molecular Biology and Biological Sciences
Vanderbilt University, Nashville, Tennessee
Supervisor: Prof. Martin Egli
01/2000 - 07/2000 **Postdoctoral Fellow**
Department of Molecular Pharmacology and Biological Chemistry
Northwestern University, Chicago, Illinois
Supervisor: Prof. Martin Egli
01/1995 - 10/1995 **Research Assistant**
Bayer Rubber Inc., Sarnia, Ontario, Canada
Supervisor: Dr. Judit E. Puskas
05/1994 - 08/1994 **Research Assistant**
Steacie Institute for Molecular Sciences (National Research Council)
Ottawa, Ontario, Canada
Supervisor: Dr. Keith U. Ingold

HONOURS AND AWARDS

2017 - Concordia University Research Fellow (Strategic Research Cluster: The Person and Society); **2010** - Canada Research Chair in Biological Chemistry (Tier II - renewal, Concordia University); **2007** - Ichikizaki Travel Award for Young Chemists; **2006** - Petro Canada Young Innovator Award; **2004** - Canada Research Chair in Biological Chemistry

(Tier II, Concordia University); **2003 -** Fonds Québécois de la Recherche sur la Nature et les Technologies (FQRNT) - Programme Stratégique de Professeurs-Chercheurs (subvention salariale, Université Laval, declined); **2002 -** Fonds pour la Formation de Chercheurs et l'Aide à la Recherche (FCAR) postdoctoral fellowship; **2001 -** Natural Sciences and Engineering Research Council of Canada (NSERC) postdoctoral fellowship (PDF).

PEER-REVIEWED PUBLICATIONS (supervised trainees are underlined, * indicates corresponding author):

71. Behmand, B., Noronha, A.M., **Wilds, C.J.**, Marignier, J.L., Mostafavi, M., Wagner, J.R., Hunting, D.J., Sanche, L. (**2019**) "*Hydrated Electrons Induce the Formation of Interstrand Cross-links in DNA Modified by Cisplatin Adducts*", submitted to Journal of Radiation Research (Manuscript ID: JRRS-D-19-00229, submitted online 19/08/19).

70. Copp, W., O'Flaherty, D.K., **Wilds, C.J.*** (**2018**) "*Covalent capture of OGT's active site using engineered human-E. coli chimera and intrastrand DNA cross-links*", Org. Biomol. Chem., 16, 9053 - 9058.

69. Sacre, L., O'Flaherty, D.K., Archambault, P., Copp, W., Peslherbe, G.H., Muchall, H.M., **Wilds, C.J.*** (**2018**) "*O^4-Alkylated-2'-deoxyuridine repair by O^6-alkylguanine-DNA alkyltransferase is augmented by a C5-fluorine modification*", ChemBioChem, 19, 575-582.

68. Liczner, C., Grenier, V., **Wilds, C.J.*** (**2018**) "*Reversible Diselenide Cross-links are Formed Between Oligonucleotides Containing 2'-Deoxy-6-selenoinosine*", Tetrahedron Letters, 59, 38-41.

67. O'Flaherty, D.K., **Wilds, C.J.*** (**2017**) "*AGT Activity Towards Intrastrand Cross-linked DNA is Modulated by the Alkylene Linker*", ChemBioChem, 18, 2351-2357.

66. Schoonhoven, N.M., O'Flaherty, D.K., McManus, F.P., Sacre, L., Noronha, A.M., Kornblatt, M.J.*, **Wilds, C.J.*** (**2017**) "*Altering Residue 134 Confers an Increased Substrate Range of Alkylated Nucleosides to the E. coli OGT Protein*", Molecules, 22, E1948.

65. Denisov, A., McManus, F.P., O'Flaherty, D.K., Noronha, A.M., **Wilds, C.J.*** (**2017**) "*Structural Basis of Interstrand Cross-link Repair by O6-Alkylguanine DNA Alkyltransferase*", Org. Biomol. Chem., 15, 8361-8370.

64. Copp, W., Denisov, A., Xie, J., Noronha, A.M., Liczner, C., Safaee, N., **Wilds, C.J.***, Gehring, K.* (**2017**) "*Influence of Nucleotide Modifications at the C2' Position on the Hoogsteen Base-Paired Parallel-Stranded Duplex of Poly(A) RNA*", Nucleic Acids Research, 45, 10321-10331.

63. Sacre, L., **Wilds, C.J.*** (**2017**) "*Fluorine at the C5 Position of 2'-Deoxyuridine Enhances Repair of an O^4-Methyl Adduct by O^6-Alkylguanine DNA Alkyltransferases*", European Journal of Organic Chemistry, 3003-3008.

62. O'Flaherty, D.K., **Wilds, C.J.*** (**2017**) "*Site-specific Covalent Capture of Human O^6-Alkylguanine-DNA-alkyltransferase using Single-stranded Intrastrand Cross-linked DNA*", Org. Biomol. Chem., 15, 189-196.

61. Xu, W., Kool, D., O'Flaherty, D.K., Keating, A.M., Sacre, L., Egli, M., Noronha, A.M., **Wilds, C.J.**, Zhao, L.* (**2016**) *"O^6-2'-Deoxyguanosine-butylene-O^6-2'-deoxyguanosine DNA Interstrand Cross-Links are Replication-Blocking and Mutagenic DNA Lesions*", Chemical Research in Toxicology, 29, 1872-1882.

60. O'Flaherty, D.K., **Wilds, C.J.*** (**2016**) " *Preparation of Intrastrand {G}O6-Alkylene-O6{G} Cross-Linked Oligonucleotides*", Curr. Protoc. Nucleic Acid Chem., 66, 5.17.1-5.17.24.

59. O'Flaherty, D.K., Patra, A., Su, Y., Guengerich, F.P., Egli, M.*,**Wilds, C.J.*** (**2016**) *"Lesion Orientation of O4-Alkylthymidine Influences Replication by Human DNA Polymerase η*", Chemical Science, 7, 4896-4904.

58. Abou Assi, H., Harkness, R., Martin-Pintado, N., **Wilds, C.J.,** Campos-Olivas, R., Mittermaier, A., González, C.*, Damha, M.J.* (**2016**) "*Stabilization of i-Motif Structures by 2'-β-Fluorination of DNA*", Nucleic Acids Research, 44, 4998-5009.

57. Carter, A., Seaberg, M., Fan, H.-F., Sun, G., **Wilds, C.**, Li, H.-W., Perkins, T.* (**2016**) "*Sequence-Dependent Nanometer-Scale Conformational Dynamics of Individual RecBCD-DNA Complexes*", Nucleic Acids Research, 44, 5849-5860.

56. O'Flaherty, D.K., **Wilds, C.J.*** (**2016**) "*O^6-Alkylguanine DNA Alkyltransferase Repair Activity Towards Intrastrand Cross-Linked DNA is Influenced by the Internucleotide Linkage*", Chemistry - An Asian Journal, 11, 576-583.

55. O'Flaherty, D.K., Guengerich, F.P., Egli, M.*, **Wilds, C.J.*** (**2015**) "*Backbone Flexibility Influences Nucleotide Incorporation by Human Translesion DNA Polymerase η Opposite Intrastrand Cross-linked DNA*", Biochemistry, 54, 7449-7456.

54. O'Flaherty, D.K., **Wilds, C.J.*** (**2015**) "*Synthesis, Characterization and Repair of a Flexible O^6-2'-Deoxyguanosine-alkylene-O^6-2'-deoxyguanosine Intrastrand Cross-Link*", Chemistry - A European Journal, 21, 10522-10529.

53. Ko, N.R., Cheong, J., Noronha, A.M., **Wilds, C.J.*,** Oh, J.K.* (**2015**) "*Reductively-Sheddable Cationic Nanocarriers for Dual Chemotherapy and Gene Therapy with Enhanced Release*", Colloids and Surfaces B: Biointerfaces, 126, 178-187.

52. McManus, F.P., **Wilds, C.J.*** (**2014**) "*O^6-Alkylguanine-DNA Alkyltransferase Mediated Repair of O^4-Alkylated 2'-Deoxyuridines*", ChemBioChem, 15, 1966-1977.

51. O'Flaherty, D.K., Denisov, A., Noronha, A.M., **Wilds, C.J.*** (**2014**) "*NMR Structure of an Ethylene Interstrand Cross-Linked DNA which Mimics the Lesion Formed by 1,3-Bis(2-chloroethyl)-1-nitrosourea*", ChemMedChem, 9, 2099-2103.

50. O'Flaherty, D.K., McManus, F.P., Noronha, A.M., **Wilds, C.J.*** (**2014**) "*Synthesis of Building Blocks and Oligonucleotides Containing {T}O4-Alkylene-O4{T} Interstrand Cross-Links*", Curr. Protoc. Nucleic Acid Chem., 5.13.1-5.13.19.

49. Safaee, N., Noronha, A.M., Rodionov, D., Kozlov, G., **Wilds, C.J.**, Sheldrick, G.M., Gehring K.* (**2013**) "*Structure of the Parallel Duplex of Poly(A) RNA: Evaluation of a 50 Year-Old Prediction*", Angew. Chem. Int. Ed. Engl., 52, 10370-10373.

48. McManus, F.P., Khaira, A., Noronha, A.M., **Wilds, C.J.*** (**2013**) "*Preparation of Covalently Linked Complexes Between DNA and O^6-Alkylguanine-DNA Alkyltransferase Using Interstrand Cross-Linked DNA*", Bioconjugate Chemistry, 24, 224-233.

47. McManus, F.P., **Wilds, C.J.*** (**2013**) "*Engineering of a O^6-alkylguanine-DNA alkyltransferase chimera and repair of O^4-alkyl thymidine adducts and O^6-alkylene-2'-deoxyguanosine cross-linked DNA*", Toxicology Research, 2, 158-162.

46. Sun, G., Noronha, A.M., Miller, P.S., **Wilds, C.J.*** (**2012**) "*Synthesis of Building Blocks and Oligonucleotides With {T}N3-alkyl-N3{T} Cross-Links*", Curr. Protoc. Nucleic Acid Chem., 55, 5.11.1-5.11.17.

45. Safaee, N., Kozlov, G., Noronha, A.M., Xie, J., **Wilds, C.J.**, Gehring, K.* (**2012**) "*Interdomain Allostery Promotes Assembly of the polyA mRNA Complex with PABP and eIF4G*", Molecular Cell, 48, 375-386.

44. McManus, F.P., O'Flaherty, D.K., Noronha, A.M., **Wilds, C.J.*** (**2012**) "*O^4-Alkyl-2'-Deoxythymidine Cross-linked DNA to Probe Recognition and Repair by O^6-Alkylguanine DNA Alkyltransferases*", Org. Biomol. Chem., 10, 7078-7090.

43. Martín-Pintado, N., Yahyaee-Anzahaee, M., Campos-Olivas, R., Noronha, A.M., **Wilds, C.J.**, Damha, M.J.*, González, C.* (**2012**) "*The Solution Structure of Double Helical Arabino Nucleic Acids (ANA and 2'F-ANA): Effect of Arabinoses in Duplex-Hairpin Interconversion*", Nucleic Acids Research, 40, 9329-9339.

42. Sun, G., Noronha, A., **Wilds, C.*** (**2012**) "*Preparation of N3-Thymidine-Butylene-N3-Thymidine Interstrand Cross-linked DNA via an Orthogonal Deprotection Strategy*", Tetrahedron, 68, 7787-7793.

41. **Wilds, C.J.***, Booth, J.D., Noronha, A.M. (**2011**) "*Synthesis of Building Blocks and Oligonucleotides With {G}O6-alkyl-O6{G} Cross-Links*", Curr. Protoc. Nucleic Acid Chem., 44, 5.9.1-5.9.19.

40. McManus, F.P., Fang, Q., Booth, J.D., Noronha, A.M., Pegg, A.E., **Wilds, C.J.*** (**2010**) "*Synthesis and Characterization of Oligonucleotides Containing an O^6-2'-Deoxyguanosine-Alkyl-O^6-2'-Deoxyguanosine Interstrand Cross-Link in a 5'-GNC Motif and Repair by Human O^6-Alkylguanine-DNA Alkyltransferase*", Org. Biomol. Chem., 8, 4414-4426.

39. Hlavin, E.M., Smeaton, M.B., Noronha, A.M., **Wilds, C.J.**, Miller, P.S.* (**2010**) "*Cross-Link Structure Affects Replication-Independent DNA Interstrand Cross-Link Repair in Mammalian Cells*", Biochemistry, 49, 3977-3988.

38. Smeaton, M.B., Hlavin, E.M., Noronha, A.M., Murphy, S.P., **Wilds, C.J.**, Miller, P.S.* (**2009**) "*Effect of Cross-Link Structure on DNA Interstrand Cross-Link Repair Synthesis* ", Chem. Res. Toxicol., 22, 1285-1297.

37. Glick, J., Xiong, W., Lin, Y., Noronha, A.M., **Wilds C.J**., Vouros, P.* (**2009**) "*The Influence of Cytosine Methylation on the Chemoselectivity of Benzo[a]pyrene Diol Epoxide-Oligonucleotide Adducts Determined Using nano LC-MS/MS*", J. Mass Spectrom., 44, 1241-1248.

36. Fang, Q., Noronha, A.M., Murphy, S.P., **Wilds, C.J.**, Tubbs, J.L., Tainer, J.A., Chowdhury, G., Guengerich, F.P., Pegg, A.E.* (**2008**) "*Repair of O6-G-alkyl-O6-G Interstrand Cross-link by Human O6-Alkylguanine-DNA Alkyltransferase*", Biochemistry, 47, 10892-10903.

35. Smeaton, M.B., Hlavin, E.M., McGregor Mason, T., Noronha, A.M., **Wilds, C.J.**, Miller, P.S.* (**2008**) "*Distortion-Dependent Unhooking of Interstrand Cross-Links in Mammalian Cell Extracts*", Biochemistry, 47, 9920-9930.

34. **Wilds, C.J**.*, Xu, F., Noronha, A.M. (**2008**) "*Synthesis and Characterization of DNA Containing an N1-2'-Deoxyinosine-ethyl-N3-thymidine Interstrand Cross-Link: A Structural Mimic of the Cross-Link Formed by 1,3-Bis-(2-chloroethyl)-1-nitrosourea*", Chem. Res. Toxicol., 21, 686-695.

33. **Wilds, C.J.***, Palus, E., Noronha, A.M. (**2007**) "*An approach for the synthesis of duplexes containing N3T-butyl-N3T interstrand cross-links via a bisphosphoramidite strategy*", Can. J. Chem., 85, 249-256.

32. **Wilds, C.J**.*, Booth, J.D., Noronha, A.M. (**2006**) "*Synthesis of Oligonucleotides Containing an O^6-G-alkyl-O^6-G Interstrand Cross-Link*", Tetrahedron Lett., 47, 9125-9128.

31. Egli, M.*, Pallan, P.S., Pattanayek, R., **Wilds, C.J.**, Lubini, P., Minasov, G., Dobler, M., Leumann, C.J., Eschenmoser A. (**2006**) "*Crystal structure of homo-DNA and nature's choice of pentose over hexose in the genetic system*", J. Am. Chem. Soc., 128, 10847-10856.

30. Pallan, P.S., von Matt, P., **Wilds, C.J.**, Altmann, K.H., Egli M.* (**2006**) "*RNA-Binding Affinities and Crystal Structure of Oligonucleotides Containing Five-Atom Amide-Based Backbone Structures*", Biochemistry, 45, 8048-8057.

29. Li, F., Sarkhel, S., **Wilds, C.J.**, Wawrzak, Z., Prakash, T.P., Manoharan, M., Egli, M.* (**2006**) "*2'-Fluoroarabino- and arabinonucleic acid show different conformations, resulting in deviating RNA affinities and processing of their heteroduplexes with RNA by RNase H.*", Biochemistry, 45, 4141-4152.

28. **Wilds, C.J.**, Noronha, A.M., Robidoux, S., Miller P.S.* (**2005**) "*Synthesis and characterization of DNA duplexes containing an N3T-ethyl-N3T interstrand crosslink in opposite orientations*", Nucleosides Nucleotides & Nucleic Acids, 24, 965-969.

27. Webba da Silva, M., Bierbryer, R. G., **Wilds, C.J.**, Noronha, A.M., Colvin, O.M., Miller, P.S., Gamcsik, M.P.* (**2005**) "*Intrastrand Base-Stacking Buttresses Widening of Major Groove in Interstrand Cross-Linked B-DNA*", Bioorg. Med. Chem., 13, 4580-4587.

26. Noll, D.M., Webba da Silva, M., Noronha, A.M., **Wilds, C.J.**, Colvin, O.M., Gamcsik, M.P., Miller, P.S.* (**2005**) "*Structure, Flexibility, and Repair of Two Different Orientations of the Same Alkyl Interstrand DNA Cross-Link*", Biochemistry, 44, 6764-6775.

25. Webba da Silva, M., **Wilds, C.J.**, Noronha, A.M., Colvin, O.M., Miller P.S., Gamcsik, M.P.* (**2004**) "*Accommodation of Mispair Aligned N3T-Ethyl-N3T DNA Interstrand Cross Link*", Biochemistry, 43, 12549-12554.

24. **Wilds, C. J.**, Noronha, A. M., Robidoux, S., Miller, P.S.* (**2004**) "*Mispair-Aligned N3T-alkyl-N3T Interstrand Cross-Linked DNA: Synthesis and Characterization of Duplexes with Interstrand Cross-Links of Variable Lengths*", J. Am. Chem. Soc., 126, 9257-9265.

23. Noll, D. M., Noronha, A. M., **Wilds, C. J.,** Miller, P.S.* (**2004**) "*Preparation of Interstrand Cross-Linked DNA Oligonucleotide Duplexes*", Frontiers in Bioscience, 9, 421-37.

22. Pallan, P.S., **Wilds, C.J.,** Wawrzak, Z., Krishnamurthy, K., Eschenmoser, A., Egli, M.* (**2003**) "*Why Does TNA Pair More Strongly with RNA than with DNA? - An Answer from X-ray Analysis*", Angewandte Chemie International Edition, 42, 5893-5895.

21. **Wilds, C.J.,** Maier, M.A., Manoharan, M., Egli, M.* (**2003**) "*Structural Basis for Recognition of Guanosine by a Synthetic Cytosine Analogue: Guanidinium G-Clamp*", Helvetica Chimica Acta, 86, 966-978.

20. **Wilds, C.J.,** Pattanayek, R., Pan, C., Wawrzak, Z., Egli, M.* (**2002**) "*Selenium-Assisted Nucleic Acid Crystallography: Use of Phosphoroselenoates for MAD Phasing of a DNA Structure*", J. Am. Chem. Soc., 124, 14910-14916.

19. **Wilds, C.J.**, Wawrzak, Z., Krishnamurthy, R., Eschenmoser, A., Egli, M.* (**2002**) "*Crystal Structure of a B-form DNA Duplex Containing (L)-α-Threofuranosyl (3'→2') Nucleosides: A Four Carbon Sugar is Easily Accommodated into the Backbone of DNA*", J. Am. Chem. Soc., 124, 13716-13721.

18. Teplova, M., **Wilds, C.J.**, Wawrzak, Z., Tereshko, V., Du, Q., Carrasco, N., Huang, Z., Egli, M.* (**2002**) "*Covalent Incorporation of Selenium into Oligonucleotides for X-ray Crystal Structure Determination via MAD: Proof of Principle*", Biochemie, 84, 849-858.

17. Noronha, A.M., **Wilds, C.J.**, Miller P.S.* (**2002**) "*N^4C-Alkyl-N^4C Cross-Linked DNA: Bending Deformations in Duplexes that Contain a -CNG- Interstrand Cross-Link*", Biochemistry, 41, 8605-8612.

16. Lok, C.-N., Viazovkina, K., Min, K.-L., Nagy, E., Wilds, C.J., Damha, M.J.*, Parniak, M.A.* (**2002**) "*Potent Gene-Specific Inhibitory Properties of Mixed-Backbone Antisense Oligonucleotides Comprised of 2'-Deoxy-2'-fluoro-D-arabinose and 2'-Deoxyribose Nucleotides*", Biochemistry, 41, 3457-3467.

15. Noronha, A.M., Noll, D.M., **Wilds, C.J.**, Miller, P.S.* (**2002**) "*N^4C-Ethyl-N^4C Cross-linked DNA: Synthesis and Characterization of Duplexes with Interstrand Cross-links of Different Orientations*", Biochemistry, 41, 760-771.

14. **Wilds, C.J.,** Maier, M.A., Tereshko, V., Manoharan, M., Egli, M.* (**2002**) "*Direct Observation of a Cytosine Analogue that Forms Five Hydrogen Bonds to Guanosine: Guanidino G-Clamp*", Angewandte Chemie International Edition, 41, 115-117.

13. Du, Q., Carrasco, N., Teplova, M., **Wilds, C.J.**, Egli, M., Huang Z.* (**2002**) "*Internal Derivatization of Oligonucleotides with Selenium for X-ray Crystallography Using MAD*", J. Am. Chem. Soc., 124, 24-25.

12. Denisov, A.Y., Noronha, A.M., **Wilds, C.J.**, Trempe, J.-F., Pon, R.T., Damha M.J.*, Gehring, K.* (**2001**) "*Solution Structure of a Chimeric Arabinonucleic Acid (ANA)•RNA Hairpin Duplex: Comparison with 2'F-ANA/RNA and DNA/RNA Hybrids*", Nucleic Acids Research, 29, 4284-4293.

11. Damha, M.J.*, Noronha, A. M., **Wilds, C.J.**, Trempe, J.F., Denisov, A., Gehring, K. (**2001**) "*Properties of arabinonucleic acids (ANA & 2'F-ANA): Implications for the design of antisense therapeutics that invoke RNase H cleavage of RNA*", Nucleosides, Nucleotides & Nucleic Acids, 20, 429-440.

10. **Wilds, C.J.**, Minasov, G., von Matt, P., Natt, F., Altmann, K.-H., Egli, M.* (**2001**) "*Studies of a Chemically Modified Oligonucleotide Containing a 5-Atom Amide Backbone Which Exhibits Improved Binding to RNA*", Nucleosides, Nucleotides & Nucleic Acids, 20, 991-994.

9. Trempe, J. F., **Wilds, C.J.**, Denisov, A., Pon, R. T., Damha, M. J., Gehring, K.* (**2001**) "*NMR solution structure of an oligonucleotide hairpin with a 2'F-ANA/RNA stem: implications for RNase H specificity toward DNA/RNA hybrid duplexes*", J. Am. Chem. Soc., 123, 4896-4903.

8. Tereshko, V., **Wilds, C.J.**, Minasov, G., Prakash, T.P, Maier, M.A., Howard, A., Wawrzak, Z., Manoharan, M., Egli, M.* (**2001**) "*Detection of alkali metal ions in DNA crystals using state-of-the-art X-ray diffraction experiments*", Nucleic Acids Research, 29, 1208-1215.

7. Minasov, G., Matulic-Adamic, J., **Wilds, C.J.**, Haeberli, P., Usman, N., Beigelman, L., Egli, M.* (**2000**) "*Crystal structure of an RNA duplex containing phenyl-ribonucleotides, hydrophobic isosteres of the natural pyrimidines*", RNA, 6, 1516-1528.

6. **Wilds, C.J.**, Damha, M.J.* (**2000**) "*2'-Deoxy-2'-fluoro-β-D-arabinonucleosides and oligonucleotides (2'F-ANA): synthesis and physicochemical studies*", Nucleic Acids Research, 28, 3625-3635.

5. Noronha, A., **Wilds, C.J.**, Lok, C.N., Viazovkina, K., Arion, D., Parniak, M.A., Damha, M.J.* (**2000**) "*Synthesis and biophysical properties of arabinonucleic acids (ANA): CD spectra, melting temperatures, and RNase H susceptibility of ANA/RNA hybrids*", Biochemistry, 39, 7050-7062.

4. **Wilds, C. J.**, Damha, M. J.* (**1999**) "*Duplex recognition by oligonucleotides containing 2'-deoxy-2'-fluoro-D-arabinose and 2'-deoxy-2'-fluoro-D-ribose. Intermolecular [2'OH↔ phosphate] contacts versus sugar puckering in the stabilization of triple helical complexes*", Bioconjugate Chemistry, 10, 299-305.

3. Damha, M.J.*, **Wilds, C.J.**, Noronha, A., Brukner, I., Borkow, G., Arion, D., Parniak, M.A. (**1998**) "*Hybrids of RNA and arabinonucleic acids (ANA and 2'F-ANA) are substrates of Ribonuclease H*", J. Am. Chem. Soc., 120, 12976-12977.

2. Puskas, J.E.*, **Wilds, C.J.** (**1998**) **"***Multi-arm star polyisobutylenes by living carbocationic polymerization*", Journal of Polymer Science Part A: Polymer Chemistry, 36, 85-92.

1. Puskas, J.E.*, **Wilds, C.** (**1994**) "*Kinetics of the epoxidation of butyl rubber; development of a high-precision analytical method for unsaturation measurement*", Rubber Chemistry and Technology, 67, 329-341.

<u>PUBLISHED CONFERENCE PROCEEDINGS</u> (supervised trainees are underlined):

4. <u>Schoonhoven, N.M.</u>, <u>Murphy, S.P.</u>, <u>O'Flaherty, D.K.</u>, <u>Noronha, A.M.</u>, Kornblatt, M.J., **Wilds, C.J.** (**2008**) "*Synthesis, biophysical and repair studies of O6-2'-deoxyguanosine adducts by Escherichia coli OGT*" Nucleic Acids Symp Ser (Oxf), 52, 449-450 (Joint Symposium of the 18th International Roundtable on Nucleosides, Nucleotides and Nucleic Acids and the 35th International Symposium on Nucleic Acids, September 2008, Sponsor: International Society for Nucleosides, Nucleotides and Nucleic Acids).

3. <u>Booth J.D.</u>, <u>Murphy, S.P.</u>, <u>Noronha, A.M.</u>, **Wilds, C.J.** (**2008**) "*Effect of linker length on DNA duplexes containing a mismatched O6-2'-deoxyguanosine-alkyl interstrand cross-link*" Nucleic Acids Symp Ser (Oxf), 52, 431-432 (Joint Symposium of the 18th International Roundtable on Nucleosides, Nucleotides and Nucleic Acids and the 35th International Symposium on Nucleic Acids, September 2008, Sponsor: International Society for Nucleosides, Nucleotides and Nucleic Acids).

2. Noronha, A.M., Booth, J.D., **Wilds, C.J.** (**2008**) "*Properties of novel interstrand cross-linked DNA to probe DNA repair*", Biochemistry and Cell Biology, 86, 184 (50th Annual Meeting and Conference of the Canadian Society of Biochemistry, Molecular and Cellular Biology, July 2007, Sponsor: Canadian Society for Biochemistry and Molecular & Cellular Biology).

1. Fang, Q., Pegg, A.E., Noronha, A.M., Booth, J.D., Murphy, S.P., **Wilds, C.J.** (**2008**) "*Repair of G-O-6-alkyl-O-6-G interstrand cross-link by human O-6-alkylguanine-DNA alkyltransferase (hAGT)*", Proceedings of the American Association for Cancer Research Annual Meeting, 49, 593 (99th Annual Meeting of the American Association for Cancer Research, San Diego, April 2008, Sponsor: American Association for Cancer Research).

PATENTS:

Damha, M. J., Parniak, M. A., Noronha, A., Wilds, C., Arion, D. and Borkow, G. "Antisense oligonucleotide constructs based on β-arabinose and its analogues." Canadian Provisional patent, #2,241,361 filed June 19/99; Patent Cooperation Treaty (PCT) filed June 16, 1999. WO09967378A1 (12/29/1999).

INVITED LECTURES:

24. **Wilds, C.J.** "*Influence of Nucleobase Modifications on DNA Repair and Processing by a Translesion Polymerase*", Université de Sherbrooke, Faculté de médecine et des sciences de la santé (Département de Médecine Nucléaire et Radiobiologie), Sherbrooke, Québec, April 25, 2018.

23. **Wilds, C.J.** "*Influence of Nucleobase Modifications on DNA Repair and Processing by a Translesion Polymerase*", University of California, Department of Pharmaceutical Sciences, Irvine, Irvine, California, December 15, 2017.

22. **Wilds, C.J.** "*Influence of Nucleobase Modifications on DNA Repair and Processing by a Translesion Polymerase*", Alnylam Pharmaceuticals, Boston, Massachusetts, July 28, 2017.

21. **Wilds, C.J.** "*Influence of DNA Flexibility Towards Human O^6-Alkylguanine DNA Alkyltransferase Activity and Nucleotide Incorporation by a Translesion DNA Polymerase*", 99th Canadian Chemistry Conference and Exhibition, Halifax, Nova Scotia, June 5-9, 2016.

20. **Wilds, C.J.** "*Probing the Repair Activity of O^6-Alkylguanine-DNA Alkyltransferases with Chemically Modified Oligonucleotides and Insights on the Duplex Formed by Polyadenosine*", University of Toronto, Department of Pharmaceutical Sciences, Leslie Dan Faculty of Pharmacy, Toronto, Ontario, May 6, 2016.

19. **Wilds, C.J.** "*Probing the Repair Activity of O^6-Alkylguanine-DNA Alkyltransferases with Chemically Modified Oligonucleotides and Insights on the Duplex Formed by Polyadenosine*", Université de Sherbrooke, Faculté de médecine et des sciences de la santé (Département de Médecine Nucléaire et Radiobiologie), Sherbrooke, Québec, August 31, 2015.

18. **Wilds, C.J.** "*Investigation of the Substrate Range of O^6-Alkylguanine-DNA Alkyl-transferases Using Chemically Modified Oligonucleotides and Properties of Parallel Stranded Adenosine Duplexes*", Vanderbilt University Medical School (Department of Biochemistry), Nashville, Tennessee, June 23, 2014.

17. **Wilds, C.J.** "*Investigation of the Substrate Range of O^6-Alkylguanine-DNA Alkyl-transferases Using Chemically Modified Oligonucleotides and Properties of Parallel Stranded Adenosine Duplexes*", Central Michigan University (Department of Chemistry), Mount Pleasant, Michigan, April 7, 2014.

16. **Wilds, C.J.** "*Investigation of the Substrate Range of O^6 Alkyl guanine-DNA Alkyl-transferases Using Chemically Modified Oligonucleotides and Properties of Parallel Stranded Adenosine Duplexes*", Queen's University (Department of Chemistry), Kingston, Ontario, February 14, 2014.

15. **Wilds, C.J.** "*Investigation of the Substrate Range of O^6-Alkylguanine-DNA Alkyl-transferases Using Chemically Modified Oligonucleotides and Properties of Parallel Stranded Adenosine Duplexes*", University of Waterloo (Department of Chemistry), Waterloo, Ontario, December 6, 2013.

14. Safaee, N., Rodionov, D., Kozlov, G., Gehring K., Sheldrick, G.M., Noronha, A.M., **Wilds, C.J.**, "*Structure and Biophysical Studies of a Parallel Stranded poly-Adenosine Duplex*", 96th Canadian Chemistry Conference and Exhibition, Québec, Québec, May 26-30, 2013.

13. **Wilds, C.J.** "*Synthesis of Interstrand Cross-Linked DNA and the Investigation of their Repair by Alkyl Guanine Transferases*", Brock University (Department of Chemistry), St. Catherines, Ontario, March 26, 2010.

12. **Wilds, C.J.** "*Synthesis of Interstrand Cross-Linked DNA and the Investigation of their Repair by Alkyl Guanine Transferases*", Memorial University (Department of Chemistry), St. John's, Newfoundland, December 9, 2009.

11. **Wilds, C.J.** "*Interstrand Cross-Link Repair by Alkyl Guanine Transferase*", Université de Sherbrooke, Faculté de médecine et des sciences de la santé (Département de Médecine Nucléaire et Radiobiologie), Sherbrooke, Québec, January 22, 2008.

10. **Wilds, C.J.** "*Synthesis and Characterization of DNA Duplexes Containing Interstrand Cross-Links*", Université de Québec a Montréal (Département de Chimie), Montréal, March 21, 2005.

9. **Wilds, C.J.** "*Synthesis, Physicochemical and Structural Properties of Chemically Modified Nucleic Acids*", Brock University (Department of Chemistry), St.Catherines, Ontario, March 24, 2003.

8. **Wilds, C.J.** "*Synthesis, Physicochemical and Structural Properties of Chemically Modified Nucleic Acids*", Concordia University (Department of Chemistry & Biochemistry), Montréal, Québec, March 20, 2003.

7. **Wilds, C.J.** "*Synthesis, Physicochemical and Structural Properties of Chemically Modified Nucleic Acids*", Université de Montréal (Department of Chemistry), Montréal, Québec, March 13, 2003.

6. **Wilds, C.J.** "*Synthesis, Physicochemical and Structural Properties of Chemically Modified Nucleic Acids*", University of Guelph (Department of Physics), Guelph, Ontario, March 6, 2003.

5. **Wilds, C.J.** "*Synthesis, Physicochemical and Structural Properties of Chemically Modified Nucleic Acids*", University of Ottawa (Department of Chemistry), Ottawa, Ontario, February 24, 2003.

4 . **Wilds, C.J.** "*Synthesis, Physicochemical and Structural Properties of Chemically Modified Nucleic Acids*", Laurentian University (Department of Chemistry & Biochemistry), Sudbury, Ontario, December 13, 2002.

3. **Wilds, C.J.** *Synthesis, Physicochemical and Structural Properties of Chemically Modified Nucleic Acids*", Université Laval (Department of Chemistry), Québec City, Québec, November 27, 2002.

2. **Wilds, C.J.** "*Synthesis, Physicochemical and Structural Properties of Chemically Modified Nucleic Acids*", Université Laval (Department of Biochemistry), Québec City, Québec, October 25, 2002.

1. **Wilds, C.J.** "*Nucleic Acids Based on 2-Fluoro-2-Deoxy-β-D-Arabinose & X-Ray Crystallographic Studies of DNA Mimics*", McGill University (Department of Chemistry), Montréal, Québec, November 28, 2000.

CONFERENCE PRESENTATIONS (supervised trainees are underlined):

101. Shetty, C., Noronha, A., **Wilds, C.**, Oh, J. K., "*Smart Micelloplexes for Dual Acid/Reduction-Responsive Disassembly-mediated Gene Silencing*", 30th Québec-Ontario Mini-Symposium in Bioorganic and Organic Chemistry, Ottawa University, Ottawa, Ontario, Nov. 8-10, 2019.

★★★ QOMSBOC Oral Presentation Award to C. Shetty ★★★

100. Duke, K., Noronha, A., **Wilds, C.**, "*Synthesis and Characterization of a Chemically Modified Parallel-Stranded poly(A) Duplex for Applications as a Stimuli Responsive Nanomaterial*", 22rd Annual Chemistry & Biochemistry Graduate Research Conference, Concordia University, Montréal, Québec, Nov. 15, 2019.

99. Copp, W., O'Flaherty, D.K., McManus, F.P., **Wilds, C.J.**, "*Covalent capture of OGT's active site using engineered human-E. coli chimera and intrastrand DNA cross-links*", Gordon Research Conference: Nucleosides, Nucleotides & Oligonucleotides, Newport (RI), USA, June 23-28, 2019.

98. Liczner, C., Messina, C., Forgione, P., **Wilds, C.**, "*Biomass-derived Phosphoramidites for the Labelling, Conjugation, and Cross-linking of Oligonucleotides*", 20th Tetrahedron Symposium, Bangkok, Thailand, June 18-21, 2019.

97. **Wilds, C.**, Copp, W., O'Flaherty, D.K., Sacre, L., "*Evaluating the Activity of O6-Alkylguanine DNA Alkyltransferase Towards Modified DNA Structures*", 102nd Canadian Chemistry Conference and Exhibition, Québec City, Québec, June 3-7, 2019.

96. Liczner, C., Messina, C., Forgione, P., **Wilds, C.**, "*Biomass-derived Phosphoramidites for the Labelling, Conjugation, and Cross-linking of Oligonucleotides*", 102nd Canadian Chemistry Conference and Exhibition, Québec City, Québec, June 3-7, 2019.

95. Shetty, C., Noronha, A., **Wilds, C.**, Oh, J.K. "*Dual location dual acid/reduction-degradable micelloplexes for nucleic acid delivery*", 102nd Canadian Chemistry Conference and Exhibition, Québec City, Québec, June 3-7, 2019.

94. Copp, W., Denisov, A., Xie, J., Noronha, A., Gehring, K., **Wilds, C.**, "*Influence of nucleotide modifications at the C2' position on the Hoogsteen base-paired parallel-stranded duplex of poly(A) RNA*", 21st Annual Chemistry & Biochemistry Graduate Research Conference, Concordia University,Montréal, Québec, Nov. 9, 2018.

93. Copp, W., Pontarelli, A., **Wilds, C.**, "*Preparation of Alternative Nucleic Acid Structures and Evaluation of their Repair by AGT*", 21st Annual Chemistry & Biochemistry Graduate Research Conference, Concordia University, Montréal, Québec, Nov. 9, 2018.

92. Copp, W., Denisov, A.Y., Xie, J., Noronha, A.M., Gehring, K., **Wilds, C.J.** "*Influence of nucleotide modifications at the C2' position on the Hoogsteen base-paired parallel-stranded duplex of poly(A) RNA*", XXIII International Round Table on Nucleosides, Nucleotides and Nucleic Acids, La Jolla, California, USA, August 26-30, 2018.

91. **Wilds, C.J.**, Sacre, L., O'Flaherty, D.K., Archambault, P., McManus, F., Copp, W., Peslherbe, G.H., Muchall, H.M. "*Repair of O4-Alkylated-2'-deoxyuridine by O6-Alkylguanine DNA Alkyltransferases is Enhanced by Fluorine at the C5 Position*", XXIII International Round Table on Nucleosides, Nucleotides and Nucleic Acids, La Jolla, California, USA, August 26-30, 2018.

90. Archambault, P., Sacre, L., Copp, W., O'Flaherty, D.K., **Wilds, C.J.**, Peslherbe, G.H., Muchall, H.M. "*Determining orbital interactions for insight into augmented O4-alkylated-2-deoxyuridine repair through C5-fluorine modification*", 101st Canadian Chemistry Conference and Exhibition, Edmonton, Alberta, May 27-31, 2018.

89. Liczner, C., **Wilds, C.**, "*A Greener Approach for the Synthesis of Selenium Modified Oligonucleotides*", 3rd Green & Sustainable Chemistry Conference, Berlin, Germany, May 13-16, 2018.

88. Copp, W., Denisov, A., Xie, J., Gehring, K., **Wilds, C.**, "*Influence of Nucleotide Modifications on the Parallel-Stranded Adenosine Duplex*", 10th Annual GRASP Symposium, Montréal, Québec, Nov. 20, 2017.

★★★ GRASP Presentation Award to W. Copp ★★★

87. Liczner, C., Grenier, V., **Wilds, C.**, "*Diselenide Cross-linking of Oligonucleotides Between 2'-Deoxy-6-selenoinosine*", 28th Québec-Ontario Mini-Symposium on Bioorganic and Organic Chemistry, McGill University, Montréal, Québec, Nov. 17-19, 2017.

86. Copp, W., Denisov, A., Xie, J., Gehring, K., **Wilds, C.**, "*Influence of Nucleotide Modifications at the C2' Position on the Hoogsteen Base-Paired Parallel-Stranded Duplex of Poly(A) RNA*", 20th Annual Chemistry & Biochemistry Graduate Research Conference, Concordia University, Montréal, Québec, Nov. 10, 2017.

★★★ Best Presentation - Nanochemistry Division to W. Copp ★★★

85. Liczner, C., Grenier, V., **Wilds, C.**, "*Diselenide Cross-linking of Oligonucleotides Between 2'-Deoxy-6-Selenoinosine*", 20th Annual Chemistry & Biochemistry Graduate Research Conference, Concordia University, Montréal, Québec, Nov. 10, 2017.

84. **Wilds, C.J.**, O'Flaherty, D.K., Patra, A., Su. Y., Guengerich, F.P., Egli, M., "*Influence of O^4-Alkylthymidine Lesion Orientation on Replication by Human DNA Polymerase η*", 13th Annual Meeting of the Oligonucleotide Therapeutics Society, Bordeaux, France, September 24-27, 2017.

83. Copp, W., Denisov, A., Liczner, C. Noronha, A., **Wilds, C.**, Xie, J., Safaee, N., Gehring, K., "*Influence of Nucleotide Modifications on the Parallel-Stranded Adenosine Duplex*", 100th Canadian Chemistry Conference and Exhibition, Toronto, Ontario, May 28-June 1, 2017.

82. Liczner, C., Copp, W., Denisov, A., Noronha, A., Safaee, N., Xie, J., Gehring, K., Wilds, C., "*The Influence of 2'-Modifications on the Parallel Stranded Adenosine Duplex*", 5th Zing Nucleic Acids Conference, Tampa Bay, Florida, December 2-5, 2016.

81. O'Flaherty, D.K., Patra, A., Su. Y., Guengerich, F.P., Egli, M., **Wilds, C.J. "***Influence of O^4-Alkylthymidine Lesion Orientation on Replication by Human DNA Polymerase η***",** XXII International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Paris, France, July 18-22, 2016.

80. Sacre, L., McManus, F., O'Flaherty, D., **Wilds, C.J. "***O^6-Alkylguanine-DNA alkyltransferase Repair of Modified Oligonucleotides***",** XXII International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Paris, France, July 18-22, 2016.

79. Copp, W.D., Xie, J., Denisov, A.Y., Liczner, C., Noronha, A.M., Safaee, N., Gehring, K., **Wilds, C.J. "***Influence of Nucleotide Modification on the Parallel Stranded Poly-Adenosine Duplex***",** XXII International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Paris, France, July 18-22, 2016.

78. O'Flaherty, D.K., **Wilds, C.J. "***Synthesis, Characterization and Repair of Backbone Modified O6-2'-Deoxyguanosine-alkylene-O6-2'-deoxyguanosine Intrastrand Cross-links***",** 99th Canadian Chemistry Conference and Exhibition, Halifax, Nova Scotia, June 5-9, 2016.

77. Sacre, L., **Wilds, C.J. "***O^6-Alkylguanine DNA Alkyltransferase Mediated Repair of Modified O^4-Alkyl-pyrimidines***",** 5th Annual Bionanomachines Graduate Workshop, Montréal, Québec, November 24, 2015.

★★★ Poster Prize to L. Sacre ★★★

76. O'Flaherty, D.K., Guengerich, F.P., Egli, M., **Wilds, C.J.** "*Synthesis, Characterization, Repair and Bypass of a Flexible O^6-2'-Deoxyguanosine Intrastrand Cross-link*", Gordon Research Conference (and Seminar): Nucleosides, Nucleotides & Oligonucleotides, Newport (RI), USA, June 27-July 3, 2015.

75. Copp, W., Denisov, A., Noronha, A.M., Safaee, N., Gehring, K., **Wilds, C.J.** "*Influence of 2'-Modifications on the Stability of Parallel Stranded Adenosine Duplexes*", Gordon Research Conference (and Seminar): Nucleosides, Nucleotides & Oligonucleotides, Newport (RI), USA, June 27-July 3, 2015.

74. Khalfaoui, F., Perreault, J., DiCenso, G**., Wilds, C.J.** "*Oligonucleotides Conjugated to a Dye for Real Time Visualization of DNA during Gel Electrophoresis*", 98th Canadian Chemistry Conference and Exhibition, Ottawa, Ontario, June 13-17, 2015.

73. McManus, F.P., **Wilds, C.J.** "*Repair of O^6-Alkylene-2'-Deoxyguanosine and O^4-Alkylene Thymidine Cross-Linked DNA by an O^6-Alkylguanine-DNA A lkyltransferase Chimera*", XXI International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Poznań, Poland, Aug. 24-28, 2014.

72. Noronha, A.M., Copp, W., Di Censo, G., Grenier,V., Denisov, A.Y., Safaee, N., Gehring, K., **Wilds, C.J.** "*Influence of Sugar Modifications in Parallel Stranded Polyadenosine Duplexes*", XXI International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Poznań, Poland, Aug. 24-28, 2014.

71. O'Flaherty, D.K., **Wilds, C.J.** "*Synthesis, Characterization and Functionalization of DNA containing a Bicyclic Dihydrofuropyrimidine Insert*", XXI International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Poznań, Poland, Aug. 24-28, 2014.

70. O'Flaherty, D.K., Denisov, A.Y., Noronha, A.M., **Wilds, C.J.** "*Preparation and NMR Structure of an Interstrand Cross-Linked DNA which Mimics the Lesion Formed by 1,3-Bis-(2-chloroethyl)-1-nitrosourea*", XXI International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Poznań, Poland, Aug. 24-28, 2014.

69. Kool, D., O'Flaherty, D.K., Noronha, A.M., **Wilds, C.J.**, Shriver, S.J., Egli, M., Zhao, L. "*Translesion Syntheses Across O6-Guanine-Butylene-O6-Guanine DNA Interstrand Cross-links*", 248th ACS National Meeting & Exposition, San Francisco, Aug. 10-14, 2014.

68. O'Flaherty, D.K., Denisov, A.Y., McManus, F.P., Noronha, A.M., **Wilds, C.J.** "*Investigation of the Substrate Range of O^6-Alkylguanine-DNA Alkyltransferases with Chemically Modified Oligonucleotides*", 97th Canadian Chemistry Conference and Exhibition, Vancouver, British Columbia, June 1-5, 2014.

67. Copp, W., Di Censo, G., Grenier, V., Denisov, A.Y., Noronha, A.M., **Wilds, C.J.**, Safaee, N., Gehring, K. "*Influence of Nucleoside Modifications on the Properties of Parallel Stranded Adenosine Duplexes*", 97th Canadian Chemistry Conference and Exhibition, Vancouver, British Columbia, June 1-5, 2014.

66. Di Censo, G., Safaee, N., Noronha, A.M., Gehring, K., **Wilds, C.J.** "*Stabilization of Parallel Stranded Adenosine Duplexes*", 14th Annual Symposium of PROTEO, Université Laval, Québec City, Québec, May 9, 2014.

65. Copp, W., Denisov, A.Y., Noronha, A.M., Safaee, N., Gehring, K., **Wilds, C.J.** "*Influence of 2'-Deoxyadenosine Residues on the Stability of Parallel Stranded Poly-Adenosine Duplexes*", 14th Annual Symposium of PROTEO, Université Laval, Québec City, Québec, May 9, 2014.

64. O'Flaherty, D.K., Denisov, A.Y., Noronha, A.M., **Wilds, C.J.** "*Preparation and NMR Structure of an Interstrand Cross-Linked DNA which Mimics the Lesion Formed by 1,3-Bis-(2-chloroethyl)-1-nitrosourea*", 6th Annual GRASP Symposium, Montréal, Québec, Nov. 25, 2013.

★★★ GRASP Presentation Award to D. O'Flaherty ★★★

63. Sun, G., Noronha, A.M., **Wilds, C.J.** "*Strategies to Prepare N3-Thymidine-Alkyl-N3-Thymidine Interstrand Cross-Linked DNA*", XX International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Montréal, Québec, Aug. 5-8, 2012.

★★★ Poster Prize to G. Sun ★★★

62. McManus, F.P., O'Flaherty, D.K., Vergara, J., Noronha, A.M., **Wilds, C.J.** "*Investigation of the Repair of O^6-Alkylguanine and O^4-Alkylthymine Interstrand Cross-Linked DNA by O6-Alkylguanine DNA Alkyltransferases*", XX International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Montréal, Québec, Aug. 5-8, 2012.

61. O'Flaherty, D.K., McManus, F.P., Noronha, A.M., **Wilds, C.J.** "*Synthesis and Characterization of Nucleoside Adducts to Probe Recognition and Repair by O^6-Alkylguanine DNA Alkyltransferases*", 95th Canadian Chemistry Conference and Exhibition, Calgary, Alberta, May 26-30, 2012.

60. Safaee, N, Kozlov, G., Noronha, A.M., **Wilds, C.**, Sheldrick, G., Gehring, K. "*Crystal Structure of the Parallel Double-Stranded Helix of poly(A) RNA*", 4th Annual GRASP Symposium, McGill University, Montréal, Québec, Nov. 21, 2011.

59. Vergara, J., **Wilds, C.J.** "*Investigating Human and E. Coli Homologs of O^6-Alkylguanine-DNA-Alkyltransferase Association with ICL DNA Containing a Fluorescent Base Analog*", 14th Annual Chemistry & Biochemistry Graduate Research Conference, Concordia University, Montréal, Québec, Nov. 18-19, 2011.

58. O'Flaherty, D.K., McManus, F.P., Noronha, A.M., **Wilds, C.J.** "*Synthesis and Repair Studies of Oligonucleotides Containing O^4-2'-Deoxythymidine-alkyl-O^4-2'-deoxythymidine Interstrand Cross-Links by AGT*", 14th Annual

Chemistry & Biochemistry Graduate Research Conference, Concordia University, Montréal, Québec, Nov. 18-19, 2011.

★★★ Best Presentation - Organic Chemistry to D. O'Flaherty ★★★

57. Sun, G., **Wilds, C.J.** "*Methodology Development of Interstrand Cross-link DNA Formation by Organometallic Catalysts*", 22nd Québec-Ontario Mini-Symposium on Bioorganic and Organic Chemistry, Concordia University, Montréal, Québec, Nov. 11-13, 2011.

56. Vergara, J., **Wilds, C.J.** "*Synthesis and Biophysical Analysis of O^6-Methylated-2'-deoxyguanosine and O^6-2'-Deoxyguanosine-heptyl-O^6-2'-deoxyguanosine Interstrand Cross-linked DNAs Containing Pyrrolo-dC*", 22nd Québec-Ontario Mini-Symposium in Bioorganic and Organic Chemistry, Concordia University, Montréal, Québec, Nov. 11-13, 2011.

55. O'Flaherty, D.K., McManus, F.P., Noronha, A.M., **Wilds, C.J.** "*Preparation of O^4-Alkyl-2'-deoxythymidine Interstrand Cross-linked DNA and Interaction with O^6-Alkylguanine-DNA Alkyltransferases*", 22nd Québec-Ontario Mini-Symposium in Bioorganic and Organic Chemistry, Concordia University, Montréal, Québec, Nov. 11-13, 2011.

54. McManus, F.P., O'Flaherty, D.K., Noronha, A.M., **Wilds, C.J.** "*Interaction of O6-Alkylguanine DNA Alkyltransferases with O4-Alkylthymine Adducts and Interstrand Cross-Linked DNA*", 94th Canadian Chemistry Conference and Exhibition, Montréal, Québec, June 5-9, 2011.

★★★ CSC Presentation Award to F. P. McManus ★★★

53. Vergara, J., **Wilds, C.J.**, "*Probing the Binding and Repair of ICL DNA by Human and E. Coli Homologs of O6-Alkylguanine DNA alkyltransferase with a Fluorescent Base Analog*",11th Annual Symposium of PROTEO, Université Laval, Québec, Québec, May 20, 2011.

★★★ Poster Award (Second Prize) to J. Vergara ★★★

52. Safaee, N, Kozlov, G., Noronha, A.M., **Wilds, C.**, Gehring, K. "*Poly(A) Triggers Formation of the mRNA "Closed Loop" by Inducing PABP/eIF4G Interaction*", 3rd Annual GRASP Symposium, McGill University, Montréal, Québec, Nov. 8, 2010.

51. O'Flaherty, D.K., Sun, G., Noronha, A.M., **Wilds, C.J.** "*Synthesis and Characterization of Oligonucleotides Containing O4-Butyl-2'-Deoxythymidine Cross-Links*", XIX International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Lyon, France, Aug. 29-Sept. 3, 2010.

50. McManus, F.P., Noronha, A.M., **Wilds, C.J.** "*Interaction of O6-Alkylguanine DNA Alkyltransferase with Interstrand Cross-Linked DNA",* XIX International Round Table on Nucleosides, Nucleotides and Nucleic Acids, Lyon, France, Aug. 29-Sept. 3, 2010.

49. McManus, F.P., Booth, J.D., Noronha, A.M., **Wilds, C.J. "***Binding and Repair of DNA Interstrand Cross-links in a -GNC- motif by Human O6-Alkylguanine-DNA Alkyltransferase*", 93rd Canadian Chemistry Conference and Exhibition, Toronto, Ontario, May 29-June 2, 2010.

48. Sun, G., Noronha, A.M., **Wilds, C.J. "***Synthesis of Assymetrical DNA Duplexes Containing N3-2'-Deoxythymidine-butyl-N3-2'-Deoxythymidine Interstrand Cross-Links*", 93rd Canadian Chemistry Conference and Exhibition, Toronto, Ontario, May 29-June 2, 2010.

47. McManus, F.P., Booth, J.D., Noronha, A.M., **Wilds, C.J.** "*Characterization and Repair of O6-2'-Deoxyguanosine-Alkyl-O6-2'-Deoxyguanosine Interstrand Cross-Linked DNA by Human O6-Alkylguanine-DNA Alkyltransferase*", 10th Annual Symposium of PROTEO, Concordia University, Montréal, Québec, May 14, 2010.

★★★ Poster Award (First Prize) to F. P. McManus ★★★

46. **Wilds, C.J.** "*Synthesis of Interstrand Cross-Linked DNA and the Investigation of the Repair by Alkyl Guanine Transferases*", 92nd Canadian Chemistry Conference and Exhibition, Hamilton, Ontario, May 30-June 3, 2009.

45. Schoonhoven, N.M., **Wilds, C.J.**, Kornblatt, M.J. "*Repair and Recognition of Alkylated DNA Duplexes by O^6-Alkylguanine-DNA-alkyltransferase*", 92nd Canadian Chemistry Conference and Exhibition, Hamilton, Ontario, May 30-June 3, 2009.

★★★ Wiley Book Prize (Nucleic Acids Symposium) to N. M. Schoonhoven ★★★

44. McManus, F.P., Booth, J.D., Noronha, A.M., **Wilds, C.J. "***Synthesis and Characterization of O^6-2'-Deoxyguanosine-Alkyl-O^6-2'Deoxyguanosine -GNC- Motif Cross-Links*", 92nd Canadian Chemistry Conference and Exhibition, Hamilton, Ontario, May 30-June 3, 2009.

★★★ Poster Award (Nucleic Acids Symposium) to F. P. McManus ★★★

★★★ Poster Award (Biological and Medicinal Chemistry Division) to F. P. McManus ★★★

43. McManus, F.P., Booth, J.D., Noronha, A.M., **Wilds, C.J.** "*Synthesis, Characterization and Repair of Interstrand Cross-Linked DNA Duplexes Containing O^6-2'-Deoxyguanosine-Alkyl-O^6-2'-Deoxyguanosine Within -GNC- Motifs*", 5th Annual McGill Biophysical Symposium, McGill University, Montréal, Québec, May 5, 2009.

42. McManus, F. P., Xu, F., Noronha, A.M.,**Wilds, C.J.** "*Preparation and Bending Studies of N^1-2'-Deoxyinosine-Ethyl-N^3-Thymidine Interstrand Cross-Linked DNA*", 11th Annual Chemistry & Biochemistry Graduate Research Conference, Concordia University, Montréal, Québec, Nov. 21-22, 2008.

41. Murphy, S.M., Booth, J.D., Noronha, A.M., **Wilds, C.J.** "*Synthesis and Effect on Duplex Stability of Mismatched O^6-Alkyl-2'-Deoxyguanosine Interstrand Cross-Linked DNA Containing Alkyl Linkers of Various Lengths*", 11th Annual Chemistry & Biochemistry Graduate Research Conference, Concordia University, Montréal, Québec, Nov. 21-22, 2008.

40. O'Flaherty, D.K., Schoonhoven, N.M., Murphy, S.P., Noronha, A.M., Kornblatt, M.J., **Wilds,C.J.** "*Synthesis and Repair Studies of Oligonucleotides Containing O6-2'-Deoxyguanosine Adducts*" 11th Annual Chemistry & Biochemistry Graduate Research Conference, Concordia University, Montréal, Québec, Nov. 21-22, 2008.

39. Booth, J.D., Murphy, S.M., Noronha, A.M., **Wilds, C.J.** "*Effect of Linker Length on DNA Duplexes Containing a Mismatched O6-2'-Deoxyguanosine-Alkyl Interstrand Cross-Link*", International Society for Nucleosides, Nucleotides & Nucleic Acids XVIII International Roundtable, Kyoto, Japan, Sept. 9-12, 2008.

38. Schoonhoven, N.M., Murphy, S.P., O'Flaherty, D.K., Noronha, A.M., Kornblatt, M.J. **Wilds, C.J.** "*Synthesis, Biophysical and Repair Studies of O6-2'-Deoxyguanosine Adducts by Escherichia coli OGT*", International Society for Nucleosides, Nucleotides & Nucleic Acids XVIII International Roundtable, Kyoto, Japan, Sept. 9-12, 2008.

37. Fang, Q., Pegg, A.E., Noronha, A.M., Booth, J.D., Murphy, S.P., **Wilds, C.J.** "*Repair of G-O6-alkyl-O6-G interstrand cross-link by human O6-alkylguanine-DNA alkyltransferase (hAGT)*", 99th Annual Meeting of the American Association for Cancer Research, San Diego, CA, USA, Apr. 12-16, 2008.

36. Schoonhoven, N., **Wilds, C.J.,** Kornblatt, M.J. "*Recognition and Repair of DNA Interstrand Crosslinks by O6-Alkylguanine-DNA-Alkyltransferase, Escherichia coli*", 10th Annual Chemistry & Biochemistry Graduate Research Conference, Concordia University, Montréal, Québec, Nov. 23-24, 2007.

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