

## **PUBLICATIONS, PRESENTATIONS AND CREATIVE ACHIEVEMENTS**

### **Peer-reviewed Publications (Published, in press or accepted for publication):**

1. Novikov, M.S.; Buckheit, R.; Temburnikar, K.; Khandazhinskaya, A. L.; Ivanov, A.V.; Seley-Radtke, K.L.; "1-Benzyl derivatives of 5-(arylamino)uracils as potential anti-HIV-1 and EBV agents" *Bioorg Med Chem* **2010**, *18*, 8310-14.
2. Wauchope, O. R.; Tomney, M. J.; Pepper, J. L.; Korba, B. E.; Seley-Radtke, K. L. 2'-C-Modified tricyclic nucleosides as potential anti-HCV therapeutics, *Org Lett* **2010**, *12*, 4466-4469.
3. Matyugina, E. S.; Seley-Radtke, K. L.; Andronova, V. L.; Galegov, G. A.; Khandazhinskaya, A. L. Synthesis and antiviral evaluation against vaccinia virus of new N1-oxide analogues of 5'-noraristeromycin, *Russian J Bioorg Chem* **2010**, *36*, 730-733; Original Russian Text: *Bioorganicheskaya Khimiya*, **2010**, 797-801.
4. Tomney, M.; Korba, B.; Zimmermann, S.; Seley-Radtke, K. L. "Synthesis of a Series of 2'-Modified Tricyclic Nucleosides as Potential Anti-HCV Agents" *Antiviral Res.* **2010**, *86*, A68.
5. Sadler, J. M.; Mosley, S. L.; Dorgan, K. M.; Zhou, Z. S.; Seley-Radtke, K. L. "Synthetic Strategies Toward Carbocyclic Purine-Pyrimidine Hybrid Nucleoside Inhibitors" *Bioorg. Med. Chem.*, **2009**, *17*, 5520-5525.
6. Ivanov, A.; Tunitskaya, V.; Smirnova, O.; Buckheit, R.; Seley-Radtke, K. L.; Ivanov, A.; Novikov, M. "Synthesis and Antiviral Activity of Substituted Uracils" *Antiviral Res.* **2009**, *82*, A58.
7. Seley-Radtke, K. L.; Sunkara, N. K. "Carbocyclic Thymidine Analogues as Potential Antiviral Agents" *Nucleosides, Nucleotides, Nucleic Acids* **2009**, *28*, 633-641.
8. O'Daniel, P. I.; Jefferson, M.; Wiest, O.; Seley-Radtke, K. L. "Computational Studies of Expanded Heterocyclic Nucleosides in DNA" *J Biomol Struct Dyn*, **2008**, *3*, 283-292. (Cover)
9. Zhang, Z.; Wauchope, O. R.; Seley-Radtke, K. L. "Design, Synthesis and Mechanistic Studies of a Series of Expanded Xanthosine Nucleosides" *Tetrahedron* **2008**, *64*, 10791-10797.
10. Sadler, J. M.; Ojewoye, O.; Seley-Radtke, K. L. ""Reverse Fleximers." Introduction of a series of 5-substituted Carbocyclic uridine analogues" *Nucleic Acids Symp Ser.* **2008**, *52*, 571-572.
11. Seley-Radtke, K. L.; Zhang, Z.; Wauchope, O. R.; Zimmermann, S. C.; Ivanov, A.; Korba, B. "Hetero-expanded Purine Nucleosides. Design, Synthesis and Preliminary Biological Activity" *Nucleic Acids Symp Ser.* **2008**, *52*, 635-636.
12. Mosley, S. L.; Bakke, B. A.; Sadler, J. M.; Dorgan, K.; Zhou, Z. S.; Seley-Radtke, K. L. "Carbocyclic Pyrimidine Nucleosides as Inhibitors of S-Adenosylhomocysteine Hydrolase", *Bioorganic Med. Chem.* **2006** *14*, 7967-7971.
13. Sunkara, N. K.; Mosley, S. L.; Seley-Radtke, K. L. "A Carbocyclic 7-Deaza Purine-Pyrimidine Hybrid Nucleoside" *Collect. Czech. Chem. Commun.*, **2006**, *71*, 1161-1168.
14. Quirk, S.; Seley-Radtke, K.L. "Purification, crystallization, & preliminary X-ray characterization of human GTP fucose pyrophosphorylase" *Acta Cryst.* **2006**, *F62*, 392-394.
15. Quirk, S.; Seley, K. L. "Identification of catalytic amino acids in the human GTP fucose pyrophosphorylase active site" *Biochem.* **2005**, *44*, 13172-13178.
16. Quirk, S.; Seley, K. L. "Substrate discrimination by human GTP-fucose pyrophosphorylase" *Biochem.* **2005**, *44*, 10854-10863.

17. Seley, K. L.; Salim, S.; Zhang, L.; O'Daniel, P. I. "Molecular Chameleons". Design and Synthesis of A New Series of Flexible Nucleosides" *J. Org. Chem.* **2005**, *70*, 1612-1619.
18. Seley, K. L.; Salim, S.; Zhang, L.;"Molecular Chameleons". Design and Synthesis of C-4-Substituted Imidazole Fleximers *Org, Lett.* **2005**, *7*, 63-66.
19. Schwimmer, L. J.; Rohatgi, P.; Azizi, B.; Seley, K. L.; Doyle, D. F. "Creation and Discovery of Ligand-Receptor Pairs for Small Molecule Control of Transcription" *Proc. Nat. Acad. Sci.* **2004**, *101*, 14707-14712.
20. Polak, M.; Seley, K. L.; Plavec, J. "Conformational Properties of Novel Shaped Nucleosides – Fleximers" *J. Am. Chem. Soc.* **2004**, *126*, 8159-8166.
21. Wallace, L. J. M.; Candlish, D.; Hagos, A.; Seley, K. L.; de Koning, H. P. "Selective Transport of a New Class of Purine Antimetabolites by the Protozoan Parasite *Trypanosoma Brucei*" *Nucleosides, Nucleotides, Nucleic Acids* **2004**, *23*, 1441-1444.
22. Seley, K. L.; Mosley, S. L.; Xing, F. "Carbocyclic Isoadenosine Analogues of Neplanocin A" *Org. Letters*, **2003**, *5*, 4401-4403.
23. Seley, K. L.; O'Daniel, P. I.; Salim, S. "Design and Synthesis of a Series of Chlorinated 3-Deazaadenine Derivatives" *Nucleosides, Nucleotides, Nucleic Acids*, **2003**, *22*, 2133-2144.
24. Seley, K. L.; Quirk, S.; Salim, S.; Zhang, L.; Hagos, A. "Unexpected Inhibition of S-Adenosyl-L-homocysteine Hydrolase by a Guanosine Nucleoside" *Bioorg. Med. Chem. Lett.* **2003**, *13*, 1985-1988.
25. Seley, K. L.; Zhang, L.; Hagos, A.; Quirk, S. ""Fleximers". Design and Synthesis of A New Class of Novel Shape-Modified Nucleosides" *J. Org. Chem.*, **2002**, *67*, 3365-3373.
26. Seley, K. L.; Zhang, L. Hagos, A. ""Fleximers". Design and Synthesis of Two Novel Split Nucleosides" *Org. Letters*, **2001**, *3*, 3209-3210.
27. Barnard, D. L.; Stowell, V. D.; Seley, K. L.; Hegde, V. R.; Das, S. R.; Rajappan, V. P.; Schneller, S. W.; Smees, D. F.; Sidwell, R. W. "Inhibition of Measles Virus Replication by 5'-Nor Carbocyclic Adenosine Analogues" *Antiviral Chem. Chemoth.* **2001**, *12*, 241-250.
28. Seley, K. L.; Januszczyk, P.; Hagos, A.; Zhang, L.; Dransfield, D.T. "Synthesis and Antitumor Activity of Thieno-Separated Tricyclic Purines" *J. Med. Chem.*, **2000**, *43*, 4877-4883.
29. Barnard, D. L.; Stowell, V. D.; Seley, K. L.; Hegde, V. R.; Das, S. R.; Rajappan, V. P.; Schneller, S. W. and Sidwell, R. W. "Inhibition of Measles Virus Replication by 5'-Nor Carbocyclic Nucleoside Analogs" *Antiviral Res.* **2000**, *46*, 102.
30. Hegde, V. R.; Seley, K. L.; Schneller, S. W. Carbocyclic 5'-Norcytidine (5'-Norcarbodine)" *J. Heterocycl. Chem.* **2000**, *37*, 1361-1362.
31. Hegde, V. R.; Seley, K. L.; Schneller, S. W. "Carbocyclic 5'-Noruridine" *Nucleosides Nucleotides* **2000**, *19*, 269-273.
32. Hegde, V. R.; Seley, K. L.; Chen, X.; Schneller, S. W. "The Synthesis of Carbocyclic 5'-Nor Thymidine and an Isomer as Oligonucleotide Monomers" *Nucleosides Nucleotides*, **1999**, *18*, 1905-1910.
33. Seley, K. L.; Schneller, S. W. "7-Deaza-5'-noraristeromycin Derivatives Resembling L-Toyocomycin and L-Sangivamycin" *J. Heterocycl. Chem.* **1999**, *36*, 287-288.
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35. Seley, K. L.; Schneller, S. W. Korba, B. "Does the Anti-HBV Activity of (+)-5'-Noraristeromycin Exist in its 4'-Epimer and 4'-Deoxygenated Derivatives?" *J. Med. Chem.* **1998**, *41*, 2168-2170.

36. Seley, K. L.; Schneller, S. W.; Korba, B.; de Clercq, E.; Rattendi, D.; Lane, S.; Bacchi, C. J. "The Importance of the 4'-Hydroxyl Hydrogen for the Anti-trypanosomal and Antiviral Properties of (+)-5'-Noraristeromycin" *Bioorg. Med. Chem.* **1998**, *6*, 797-802.
37. Wu, J.; Schneller, S. W.; Seley, K. L.; de Clercq, E. "Carbocyclic 7-Deazaguanine Oxetanocin Analogues" *Heterocycles* **1998**, *47*, 757-765.
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41. Seley, K. L.; Schneller, S. W.; Rattendi, D.; Lane, S.; Bacchi, C. J. "Synthesis and Anti-Trypanosomal Activity of a Series of 7-Deaza-5'-noraristeromycin Derivatives Varied in the Cyclopentyl Ring" *Antimicrob. Agents Chemother.* **1997**, *41*, 1658-1661.
42. Seley, K. L.; Schneller, S. W.; Rattendi, D.; Lane, S.; Bacchi, C. J. "Synthesis and Anti-trypanosomal Activity of Various 8-Aza-7-deaza-5'-noraristeromycin Derivatives" *J. Med. Chem.* **1997**, *40*, 625-629.
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**Invited (Peer-reviewed) Book Chapters (published):**

44. Seley, K. L.; Mosley, S. L. "Purine Analogues and Their Role in Methylation and Cancer Chemotherapy" in *DNA Methylation and Cancer Therapy*, Moshe Szyf, Ed. Landes Bioscience, Georgetown, TX, 2004, Chapter 13, pp 178-186.
45. Seley, K. L. "Tricyclic Nucleosides Revisited" in *Recent Advances in Nucleosides: Chemistry and Chemotherapy*, pg. 299-326, C.K. Chu, Ed. Elsevier Science, **2002**.
46. Schneller, S. W.; Seley, K. L.; Hegde, V. R.; Rajappan, V. P. "5'-Norcarbanucleosides in L-Like Configurations" in *Recent Advances in Nucleosides: Chemistry and Chemotherapy*, pg. 291-297; C.K. Chu, Ed. Elsevier Science, **2002**.

**Invited Reviews (published):**

47. Seley-Radtke, K. L. "The Organic Chemistry of Drug Synthesis" by Daniel Lednicer, invited book review, *J Am Chem Soc*, **2008**, *130*, 3231-3232.
48. Seley, K. L. "CoFactor" *IDrugs*, **2001**, *4*, 99-101.
49. Seley, K. L. "Tezacitabine" *Current Opin. Investigational Drugs* **2000**, *1*, 135-140.
50. Seley, K. L. "MDL 101,731" *Investigational Drugs*, Current Drugs Ltd, **1997**.