

LIST OF PUBLICATIONS

1. E. Sochacka, R. H. Szczepanowski, M. Cypryk, M. Sobczak, M. Janicka, K. Kraszewska, P. Bartos, A. Chwialkowska, B. Nawrot: 2-Thiouracil deprived of thiocarbonyl function preferentially base pairs with guanine rather than adenine in RNA and DNA duplexes. *Nucleic Acids Res.* **2015**, DOI: [10.1093/nar/gkv109](https://doi.org/10.1093/nar/gkv109), in press
2. M. Krawiecka, B. Kuran, J. Kossakowski, M. Cieślak, J. Kazmierczak-Barańska, K. Królewska, B. Nawrot: Synthesis and Cytotoxic Properties of Halogen and Aryl-/Heteroarylpiiperaziny Derivatives of Benzofurans. *Anti-Cancer Agents in Med. Chem.* **2015**, *15*: 115-121
3. A. Rosinska, A. Maciaszek, P. Bartos, E. Sochacka, B. Nawrot: Chemical transformation of 2-thiouridine into 2-seleno-uridine via newly discovered S-geranyl-2-thiouridine. *Proceedings Coll. Symp. Ser.* **2014**, *14*: 358-360
4. P. Bartos, L. Piotrowski, B. Nawrot, G. Pratviel, E. Sochacka: The possible pathway of oxone-mediated desulfuration of 2-thiouridine. *Coll. Symp. Ser.* **2014**, *14*: 163-166
5. P. S. Pallan, Xianbin Yang, M. Sierant, N. D. Abeydeera, T. Hassell, C. Martinez, M. Janicka, B. Nawrot, M. Egli: Crystal structure, stability and Ago2 affinity of phosphorodithioate-modified RNAs. *RSC Adv.* **2014**, *4*: 64901-64904
6. S. Y. Wu, X. Yang, K. M. Gharpure, H. Hatakeyama, M. Egli, M. H. McGuire, A. S. Nagaraja, T. M. Miyake, R. Rupaimoole, C. V. Pecot, M. Taylor, S. Pradeep, M. Sierant, C. Rodriguez-Aguayo, H. J. Choi, R. A. Previs, G. N. Armaiz-Pena, Li Huang, C. Martinez, T. Hassell, C. Ivan, V. Sehgal, R. Singhanian, H.-D. Han, C. Su, Ji Hoon Kim, H. J. Dalton, C. Kovvali, K. Keyomarsi, N. A. J. McMillan, W. illem W. Overwijk, Jinsong Liu, Ju-Seog Lee, Keith A. Baggerly, Gabriel Lopez-Berestein, Prahlad T. Ram, Barbara Nawrot, Anil K. Sood: 2'-OME-phosphorodithioate-modified siRNAs show increased loading into the RISC complex and enhanced anti-tumour activity. *Nature Comm.* **2014**, *5*, 3459
7. J. Baraniak, A. Pietkiewicz, R. Kaczmarek, E. Radzikowska, K. Kulik, K. Krolewska, M. Cieslak, A. Krakowiak, B. Nawrot: N-Acyl-phosphoramidates as potential novel form of gemcitabine prodrugs. *Bioorg. Med. Chem.* **2014**, *22*: 2133-2140
8. P. Bartos, A. Maciaszek, A. Rosinska, E. Sochacka, B. Nawrot: Transformation of a wobble 2-thiouridine to 2-selenouridine via S-geranyl-2-thiouridine as a possible cellular pathway. *Bioorg. Chem.* **2014**, *56*: 49-53
9. M. Adamczyk, Ł. Pęczek, C. Rudnicki, B. Nawrot, K. Stec-Michalska: Kliniczne znaczenie GastroPanelu w diagnostyce skuteczności terapii eradykacyjnej H. pylori u pacjentów obciążonych rodzinnym występowaniem raka żołądka. *Pol. Mer. Lek.* **2013**, *35*(207): 141-147
10. E. Sochacka, P. Bartos, K. Kraszewska, B. Nawrot: Desulfuration of 2-thiouridine with hydrogen peroxide in the physiological pH range 6.6-7.6 is pH-dependent and results in two distinct products. *Bioorg. Med. Chem. Lett.* **2013**, *23*: 5803-5805
11. R. Dolot, A. Włodarczyk, G. D. Bujacz, B. Nawrot: Expression, purification, crystallization and preliminary X-ray crystallographic analysis of human histidine triad nucleotide-binding protein 2(hHINT2). *Acta Crystallographica F* **2013**, *69*: 783-787
12. M. Sierant, Xianbin Yang, B. Nawrot: siRNA Analogs Containing Phosphorodithioate Substitutions. *Phosphorus, Sulfur, and Silicon and the Related Elements* **2013**, *188*(4): 427-436
13. A. Kwiatkowska, M. Sobczak, B. Mikołajczyk, S. Janczak, A. B. Olejniczak, M. Sochacki, Z. J. Lesnikowski, B. Nawrot: siRNAs modified with boron cluster and their physicochemical and biological characterization. *Bioconjugate Chem.* **2013**, *24*: 1017-1026

14. R. Biczak, P. Bałczewski, B. Bachowska, B. Pawłowska, J. Kazmierczak-Baranska, M. Cieslak, Barbara Nawrot: Phytotoxicity and Cytotoxicity of Imidazolium Ionic Liquids Containing Sulfur Atom. *Phosphorus, Sulfur, and Silicon and the Related Elements* **2013**, 188: 459-461
15. A.F. Tracz, Ł. Pęczek, K. Żuk, K. Stec-Michalska, B. Nawrot: Wpływ eradykacji *Helicobacter pylori* na poziom ekspresji genów SATB1 i c-Myc w błonie śluzowej żołądka u pacjentów z dyspepsją w zależności od rodzinnego obciążenia występowaniem raka żołądka. *Pol. Mol. Lek.* **2013**, 34(203): 269-276
16. K. Żuk, L. Peczek, K. Stec-Michalska, M. Medrek, B. Nawrot: SATB1 expression in gastric mucosa in relation to *Helicobacter pylori* infection and family history of gastric cancer. *Advances in Medical Sciences* **2012**, 57(2): 237-243
17. R. Dolot, M. Ozga, A. Włodarczyk, A. Krakowiak, B. Nawrot: A new form of human histidine triad nucleotide-binding protein 1 (hHINT1) in complex with adenosine-5'-monophosphate at 1.38Å resolution. *Acta Cryst. F* **2012**, F68: 883-888
18. A.Tomaszewska, S. Mourgues, P. Guga, B. Nawrot, G. Pratviel: A single nuclease-resistant linkage in DNA as a versatile method for the characterization of DNA lesions: application to the guanine oxidative lesion "G+34" generated by metalloporphyrin/KHSO5 reagent. *Chem. Res. Toxicol.* **2012**, 25: 2505-2512
19. Xianbin Yang, M. Sierant, M. Janicka, L. Peczek, C. Martinez, T. Hassell, Na Li, Xi Li, T. Wang, B. Nawrot: Gene silencing activity of siRNA molecules containing phosphorodithioate substitutions. *ACS Chem. Biol.* **2012**, 7: 1214-1220
20. B. Bachowska, J. Kazmierczak-Baranska, M. Cieslak, B. Nawrot, D. Szczesna, J. Skalik, P. Bałczewski: High Cytotoxic Activity of Phosphonium Salts and Their Complementary Selectivity towards HeLa and K562 Cancer Cells: Identification of Tri-n-butyl-n-hexadecylphosphonium bromide as a Highly Potent Anti-HeLa Phosphonium Salt. *ChemOpen* **2012**, 1:33-38
21. M. Sobczak, T. Johansson, M. Bulkowski, M. Sochacki, G. Lavén, B. Mikolaczyk, J. Stawinski, B. Nawrot: DNA oligonucleotides with stereodefined phenylphosphonate and phosphonothioate internucleotide bonds: synthesis and physico-chemical properties. *Arkivoc* **2012**, (iv): 63-79
22. K. Żuk, Ł. Pęczek, K. Stec-Michalska, M. Medrek, B. Nawrot: Family history of gastric cancer correlates with decreased expression of HINT1 tumor suppressor gene in gastric mucosa of dyspeptic patients. *Oncology Lett.* **2012**, 1: 219-223
23. M. Sierant, M. Janicka, Xian-Bin Yang, N. Li, B. Nawrot: Improved stability and gene silencing activity of siRNA analogs containing phosphorodithioate linkages. *Nucleic Acid Ther.* **2011**, 21 (5), A27-A27
24. M. Sierant, D. Piotrkowska, B. Nawrot: Silencing the CDK4 and CDK6 genes through RNA interference. *Nucleic Acid Ther.* **2011**, 21(5), A26-A27
25. M. Sobczak, K. Kubiak, M. Janicka, M. Sierant, B. Mikołajczyk, W. J. Stec, B. Nawrot: Synthesis, physico-chemical and biological properties of DNA and RNA oligonucleotides containing short non-ionic internucleotide bond. *Coll. Czech. Chem. Commun.* **2011**, 76(12) 1471-1486
26. K. Ebenryter, S. Jankowski, J. Karolak-Wojciechowska, A. Fruziński, J. Kaźmierczak-Barańska, B. Nawrot, E. Sochacka: 2-Thiozebularine: base modified nucleoside fully constrained in 3'-endo conformation in solution. *Coll. Czech. Chem. Commun.* **2011**, 76: 1103-1119
27. B. Nawrot, E. Sochacka, M. Duechler: tRNA structural and functional changes induced by oxidative stress. *Cell. Mol. Life Sci.* **2011**, 68(24): 4023-4032
28. M. Sierant, A. Paduszynska, J. Kazmierczak-Baranska, B. Nacmias, S. Sorbi, S. Bagnoli, E. Sochacka, B. Nawrot: Specific Silencing of L392V PSEN1 Mutant Allele by RNA Interference. *International Journal of Alzheimer's Disease* Volume **2011**, Article D809218, 14 pages
29. A.Krakowiak, R. Pęcherzewska, R. Kaczmarek, A. Tomaszewska, B. Nawrot, W. J. Stec: Evaluation of influence of Ap(4)A analogues on Fhit-positive HEK293T cells; cytotoxicity and ability to induce apoptosis. *Bioorg. Med. Chem.* **2011**, 19: 5053-5060
30. R. Dolot, M. Ozga, A. Krakowiak, B. Nawrot: High-resolution X-ray structure of the rabbit histidine triad nucleotide-binding protein 1 (rHINT1)-adenosine complex at 1.10 Å resolution. *Acta Crystallogr D Biol Crystallogr.* **2011**, 67(Pt 7): 601-607

31. T. Ostrowski, P. Januszczuk, M. Cieslak, J. Kazmierczak-Baranska, B. Nawrot, E. Bartoszak-Adamska, J. Zeidler: 5-Ethynyl-1- β -D-ribofuranosyl-1*H*-[1,2,3]triazole-4-carboxylic acid amide (ETCAR) and its analogues: synthesis and cytotoxic properties. *Bioorg. Med. Chem.* **2011**, 19(14): 4386-4398
32. M. Sierant, Xianbin Yang, M. Janicka, Na Li, C. Martinez, T. Hassell, B. Nawrot: siRNAs with Phosphorodithioate Modification. *Coll. Symp. Ser.* **2011**, 12: 135-139
33. E. Sochacka, K. Kraszewska, M. Sochacki, M. Sobczak, M. Janicka, B. Nawrot: The 2-thiouridine unit in the RNA strand is desulfured predominantly to 4-pyrimidinone nucleoside under in vitro oxidative stress conditions. *Chem. Commun.* **2011**, 47: 4914–4916
34. R. Pecherzewska, A. Krakowiak, A. Tomaszewska, R. Kaczmarek, J. Baraniak, B. Nawrot: The analog of diadenosine tetraphosphate (JB 419) induces apoptosis in FHIT-positive cells. *FEBS J.* **2010**, 27, suppl. 1, 177-178
35. M. Sierant, M. Janicka, Xian-Bin Yang, E. Mierzejewski, B. Nawrot: Chemically modified siRNA duplexes with improved biological potential. *J. Biotechn.* **2010**, 150, suppl. 1, S32-S32
36. B. Nawrot, M. Sierant, A. Paduszyńska: Emerging drugs and targets for Alzheimer's disease. *Vol.2*. RSC Publishing (ed. A. Martinez) chapter 26, **2010**, 2: 228-268
37. K. Stec-Michalska, L. Peczek, B. Michalski, M. Adamczyk, J. Chojnacki and B. Nawrot Influence of cigarette smoking on the level of mRNA of somatostatin receptor 3 (SSTR3) in the gastric mucosa of patients with functional dyspepsia, *Adv. Med. Sci.*, **2010**, 55(1): 55-58
38. M. Sierant, J. Kazmierczak-Baranska, A. Paduszyńska, M. Sobczak, A. Pietkiewicz, B. Nawrot: Longer 19-Base pair short interfering RNA Duplexes Rather Than Shorter Duplexes Trigger RNA Interference. *Oligonucleotides* **2010**, 20(4): 199-206
39. J. Kazmierczak-Barańska, A. Pietkiewicz, M. Janicka, Y. Wei, C-O. Turrin, J-P. Majoral, B. Nawrot, A-M. Caminade: Synthesis of a fluorescent cationic phosphorus dendrimer and preliminary biological studies of its interaction with DNA. *Nucleosides, Nucleotides and Nucleic Acids* **2010**, 29:155–167
40. J. J. Wrzesinski, A. Wichlacz, D. Nijakowska, B. Rebowska, B. Nawrot, J. Ciesiolka: Phosphate residue of antigenomic HDV ribozyme important for catalysis that are revealed by phosphorothioate modification. *New J. Chem.* **2010**, 34: 1018-1026
41. D. Smuga, K. Majchrzak, E. Sochacka, B. Nawrot: RNA-cleaving deoxyribozyme 10-23 with amino acid-like functionality operates without metal ion cofactors. *New J. Chem.* **2010**, 34: 934-948
42. R. Pruzan, D. Zielinska, B. Rebowska-Kocon, B. Nawrot, S. M. Gryaznov: Stereopure oligonucleotide phosphorothioates as human telomerase substrates. *New J. Chem.* **2010**, 34: 870-874
43. S. Wirth, Ch. Rohbogner, M. Cieślak, J. Kaźmierczak-Barańska, S. Donevski, B. Nawrot, I.-P. Lorenz: Rhodium(III) and iridium(III) complexes with 1,2-naphthoquinone-1-oximate as bidentate ligand: synthesis, structure and biological activity. *J Biol. Inorg. Chem.* **2010**,15: 429-440
44. M. Sierant, K. Kubiak, J. Kaźmierczak-Barańska, M. Warashina, T. Kuwabara, B. Nawrot: Evaluation of BACE1 Silencing in Cellular Models. *International Journal of Alzheimer's Disease* **2009**, Article ID 257403, 10 pages
45. K. Stec-Michalska, S. Malicki, B. Michalski, L. Pęczek, M. Wiśniewska-Jarosińska, B. Nawrot: Gastric ghrelin level in relation to gender, stomach topography and Helicobacter pylori infection in patients with functional dyspepsia. *World J. Gastroenterol.* **2009**, 15 (43), 5409-5417
46. K. Stec-Michalska, S. Malicki, Ł. Pęczek, B. Michalski, M. Wiśniewska-Jarosińska, B. Nawrot: Gastric ghrelin level versus body mass index (BMI) in functional dyspeptic patients with H. pylori infection. *Clin. Exp. Med. Lett.* **2009**, 50 (3), 149-153
47. K. Stec-Michalska, L. Pęczek, B. Michalski, M. Wisniewska-Jarosinska, A. Krakowiak, B. Nawrot: Helicobacter pylori infection and family history of gastric cancer decrease expression of FHIT tumor suppressor gene in gastric mucosa of dyspeptic patients. *Helicobacter* **2009**, 14, 126–134
48. C. Padié, M. Maszewska, K. Majchrzak, B. Nawrot, A.-M. Caminade, J.-P. Majoral: Polycationic phosphorus dendrimers: synthesis, characterization, study of cytotoxicity, complexation of DNA, and transfection experiments. *New J. Chem.* **2009**, 33, 318-326
49. B. Nawrot, E. Sochacka: Preparation of short interfering RNA containing the modified nucleosides 2-thiouridine, pseudouridine, or dihydrouridine. *Curr. Protoc. Nucleic Acid Chem.* **2009**, Chapter 16:Unit 16.2

50. B. Nawrot, B. Rebowska: DNA oligonucleotides containing stereodefined phosphorothioate linkages in selected positions. *Curr. Protoc. Nucleic Acid Chem.* **2009**, Chapter 4:Unit 4.34
51. R. Pęcherzewska, B. Nawrot: FHIT – białko supresorowe zaangażowane w indukcję apoptozy i regulację cyklu komórkowego. *Postępy Biochemii* **2009**, 55 (1), 66-75. [in Polish]
52. K. Kubiak, B. Nawrot: RNAi w terapii. *Biotechnologia* **2009**, 1 (84), 132-151. [in Polish]
53. Ł. P. Słomnicki, B. Nawrot, W. Leśniak: S100A6 binds p53 and affects its activity. *Int. J. Biochem. Cell Biol.* **2009**, 41 (4), 784-790
54. K. Sipa, B. Nawrot: Mechanizm interferencji RNA i wykorzystanie RNAi dla celów terapeutycznych. *Farmakoterapia w Psychiatrii i Neurologii* **2008**, 1, 7-18. [in Polish]
55. M. Sierant, K. Kubiak, J. Kazmierczak-Baranska, A. Paduszynska, T. Kuwabara, M. Warashina, B. Nacmias, S. Sorbi, B. Nawrot: RNA Interference in Silencing of Genes of Alzheimer's Disease in Cellular and Rat Brain Models. *Nucleic Acids Symp.Ser.* **2008**, (52), 41-42
56. B. Nawrot: Syntetyczne kwasy nukleinowe jako inhibitory ekspresji genów. IX. Szkoła Wiosenna SMM „Od genu do białka, od struktury do funkcji i dysfunkcji”. 14-18.04.2008. Postgraduate School of Molecular. Wyd. Studium Medycyny Molekularnej, ISBN 978-83-60565-71-1. str. 39-44, **2008**. [in Polish]
57. B. Nawrot, N. Paul, B. Rebowska, W. J. Stec: Significance of Stereochemistry of 3'-Terminal Phosphorothioate-Modified Primer in DNA Polymerase-Mediated Chain extension. *Mol. Biotech.* **2008**, 40(2), 119-126
58. B. Knobloch, B. Nawrot, A. Okruszek, R. K. O. Sigel: Discrimination in Metal Ion Binding to RNA Dinucleotides with a Non-Bridging Oxygen or Sulfur in the Phosphate Diester Link. *Chem. Eur. J.* **2008**, 14(10): 3100-3109
59. B. Nawrot, B. Rebowska, O. Michalak, M. Bulkowski, D. Blaziak, P. Guga, W. J. Stec: 1,3,2-Oxathiaphospholane Approach to the Synthesis of P-Chiral Stereodefined Analogues of Oligonucleotides and Biologically Relevant Nucleoside Polyphosphates. *Pure App. Chem.* **2008**, 80(8): 1859-1871
60. K. Kubiak, J. Kaźmierczak-Barańska, E. Sochacka, R. Kierzek, M. Janicka, K. Brzuska, B. Nawrot: Modulation of Silencing Activity of siRNAs by Chemical Modifications. XIV Sympozium Czechy, Cesky Krumlov, 08-13.06.2008, pod red. M. Hocek (ISBN 80-86241-25-4). *Coll. Symp. Series Chemistry of Nucleic Acid Components* **2008**, 10, 264-267
61. B. Nawrot, K. Widera, M. Sobczak, M. Wójcik, W. J. Stec: Effect of Rp and Sp Phosphorothioate Substitution at the Scissile Site on the Cleavage Activity of Deoxyribozyme 10-23. *Current Org. Chem.* **2008**, 12(12): 1004-1009
62. K.Stec-Michalska, Ł.Peczec, A.Krakowiak, B.Michalski, J.Chojnacki, A.Knopik-Dabrowicz, G.Kłupińska, B.Nawrot: Expression of Somatostatin Receptor Subtype 3 in the Gastric Mucosa of Dyspeptic Patients in Relation to Helicobacter Pylori Infection and a Family History of Gastric Cancer. *J. Gastroenterol. Hepatol.* **2008**, 23: 424-429
63. B.Nawrot, E.Gaggelli: Understanding the chemical mechanisms of life. *Nat Chem Biol.* **2007**; 3(12):745-749
64. K. Stec-Michalska, L. Peczek, B. Michalski, A. Krakowiak, J. Chojnacki, A. Knopik-Dabrowicz, M. Jarosińska-Wiśniewska, B. Nawrot: Somatostatin receptor subtype 3 (SSTR3) mRNA level in gastric mucosa of patients with dyspepsia]. *Pol Merkur Lekarski* **2007**, 22(131): 341-345 [in Polish]
65. B. Nawrot, K. Widera, M. Wójcik, B. Rębowska, G. Nowak, W.J. Stec: Mapping of the functional phosphate groups in the catalytic core of deoxyribozyme 10-23 B. *FEBS J.* **2007**, 274, 1062-1072
66. K. Sipa, E. Sochacka, J. Kazmierczak-Baranska, M. Maszewska, M. Janicka, G. Nowak, B. Nawrot: Effect of base modifications on structure, thermodynamic stability, and gene silencing activity of short interfering RNA. *RNA* **2007**, 13(8):1301-1316
67. P. Guga, M. Boczkowska, M. Janicka, A. Maciaszek, B. Nawrot, S. Antoszczyk, W. J. Stec: Enhanced P-stereodependent stability of complexes formed by phosphorothioate oligonucleotides due to involvement of sulfur as strong hydrogen bond acceptor, *Pure Appl. Chem.* **2006**, 78, 993-1002

68. B. Nawrot, M. Sobczak, M. Wojcik, M. Janicka, M. Nowak, M. Cytryk, W.J. Stec: A novel class of DNA analogs bearing 5'-C-phosphonothymidine units: synthesis and physicochemical and biochemical properties. *Oligonucleotides* **2006**, 16(1), 68-82

69. K. Stec-Michalska, L. Peczek, A. Krakowiak, G. Klupińska, J. Chojnacki, B. Michalski, B. Nawrot: Determination of the level of mRNA of fragile histidine triad (FHIT) protein in the gastric mucosa of cigarette smoking patients with nonnuclear dyspepsia infected with *Helicobacter pylori*. *Gastroenterologia Polska* **2006**, *13*, 259-263
70. B. Nawrot, K. Sipa:, Chemical and structural diversity of siRNA molecules. *Curr. Top. Med. Chem.* **2006**; *6*(9), 913-925
71. K. Sipa, B. Nawrot: Mechanizm interferencji RNA i wykorzystanie RNAi dla celów terapeutycznych. *Proteomika i genomika w biologii i medycynie*. XXIII Zimowa Szkoła Instytutu Farmakologii PAN, Kraków **2006**. Pod redakcją B.Przewłockiej, 53-63. [in Polish]
72. B. Nawrot, K. Sipa, K. Widera, S. Antoszczyk, M. Sierant, M. Wojcik, M. Maszewska: Use of small inhibitory nucleic acids for down-regulation of genes involved in Alzheimer's Disease. Proceedings of JMMC (Eds. P. Ettmayer, G.Ecker), Vienna, June 20-23, **2005**, Medimond s.r.l., 49-54. (abstract in Current Contents)
73. B.Nawrot, K.Widera, M.Wójcik, K.Cieślińska, B.Rębowska, W.J.Stec: Phosphorothioate Modified DNazymes. *Collection Symp. Ser.* **2005**, *7*, 375-378
74. B. Nawrot: Proteazy aspartynowe w chorobie Alzheimer'a. Szkoła Wiosenna 2005 nt.: *Genetyczne podstawy chorób neurodegeneracyjnych*, Warszawa, 11.03.2005 [in Polish]
75. M.Warashina, B.Nawrot, S.Obika, L.A.Wozniak, T.Kuwabara, T. Imanishi, W.J.Stec, K.Taira: Effect of Modifications on the Intracellular Activity of a DNA Enzyme. In "*Synthetic Nucleic Acids as Inhibitors of Gene Expression: Mechanisms, Applications and Therapeutic Implications*" **2005** by Levon Khachigian, CRC Press, pp. 95-113 (Hauppauge, NY) ISBN: 0849330254
76. B. Nawrot, B. Rębowska, K. Cieślińska, W.J. Stec: New approach to the synthesis of oligodeoxyribonucleotides modified with phosphorothioates of predetermined sense of P-chirality, *Tetrahedron Lett.* **2005**, *46*, 6641-6644
77. R. Nagarajan, K. Kwon, B. Nawrot, W.J. Stec, J.T. Stivers: Catalytic Phosphoryl Interactions of Topoisomerase IB, *Biochemistry* **2005**, *44*, 11476-11485
78. K. Stec-Michalska, S. Antoszczyk, G. Klupinska, B. Nawrot: Loss of FHIT Expression in the Gastric Mucosa of Patients with Family History of Gastric Cancer and *Helicobacter pylori* Infection. *World J Gastroenterol.* **2005**, *11*(1), 17-21
79. B.Nawrot, M.Sobczak, M.Maszewska, M.Nowak, W.J.Stec: Oligonucleotides Containing P-Chiral Methanephosphonamidate (3'-N-P5') Linkages – Synthesis, Physicochemical and Biological Properties: In: *Frontiers in Nucleosides and Nucleic Acids* **2004**, R.F. Schinazi; D.C. Liotta (eds.), Informed Horizons, LLC, Tucker, USA, pp 481-507
80. B.Nawrot: Targeting BACE with Small Inhibitory Nucleic Acids – a Future for Alzheimer's Disease Therapy? *Acta Biochim. Pol.* **2004**, *51* (2), 431-444
81. B. Nawrot, O. Michalak, E. De Clercq, W.J. Stec, Analogues of Acyclic Nucleosides Derived from Tris-(hydroxymethyl)phosphine Oxide or Bis-(hydroxymethyl)phosphinic Acid Coupled to DNA Nucleobases. *Antiviral Chemistry and Chemotherapy* **2004**, *15*, 319-328
82. E. Budzisz, B.K. Keppler, G. Giester, M. Wozniczka, A. Kufelnicki, B. Nawrot: Synthesis, Crystal Structure and Biological Characterization of a Novel Complex of Palladium (II) with Coumarin Derived Ligand. *Eur. J. Inorg. Chem.* **2004**, (22), 4412-4417
83. E.Budzisz, U.Krajewska, M.Rozalski, A.Szuławska, M.Czyz, B.Nawrot: Biological Evaluation of Novel Pt(II) and Pd(II) Complexes with Highly Substituted Pyrazole Containing Ligands. *Eur. J. Pharmacol.* **2004**, *502*, 59-65
84. K.Zmudzka, B.Nawrot, T.Chojnacki, W.J.Stec: An Oxathiaphospholane Approach to One-Pot Phosphorothioylation of Isoprenoid. *Org. Lett.* **2004**, *6* (9), 1385-1387
85. A.Przykorska, K.Solecka, K.Olszak, G.Keith, B.Nawrot, E.Kuligowska: Plant Chloroplasts Have Their Own 5' flap Endonuclease. *Biochemistry* **2004**, *43*(35), 11283–11294
86. S.Olejniczak, M.Sobczak, M.J.Potrzebowski, M.Polak, J.Plavec, B.Nawrot: Assignment of Absolute Configuration at Phosphorus and Conformational Analysis of P-chiral Diastereomers of Deoxyribonucleoside Methanephosphonamidates by Means of NMR Spectroscopy, *Tetrahedron* **2004**, *60*, 3979-3986

87. B.Nawrot, O.Michalak, M.Janicka, M.Maszewska, M.Wojcik, G.Nowak, B.Mikolajczyk, W.J.Stec: Novel Nucleic Acid Analogs with a Chimeric Phosphinate/Phosphate Backbone; Synthesis and Biophysical Properties. *Arkivoc* **2004**, (iii) 151-175
88. E.Budzisz, M.Malecka, B.Nawrot: Synthesis and Structure of Highly Substituted Pyrazole Ligands and Their Complexes with Platinum (ii) and Palladium (ii) Metal Ions. *Tetrahedron* **2004**, 60(8), 1749-1759
89. B.Nawrot, K.Sipa, M.Sierant, M.Maszewska, K.Taira: BACE-directed siRNA expressed under tRNA^{Val} Promoter. *Annals of the Polish Chem. Soc.* **2004**, 625-628
90. M.Sierant, B.Nawrot: Krótkie interferujące RNA jako narzędzia do sekwencyjno-specyficznego wyciszania ekspresji genów. *Biotechnologia* **2003**, 2(61), 84-103 [in Polish]
91. S.Antoszczyk, B.Nawrot: Rybozymy w medycynie. *Biotechnologia* **2003**, 2(61), 140-152 [in Polish]
92. B.Nawrot: Hamowanie ekspresji genu proteazy aspartylowej Asp2 – białka krytycznego w rozwoju choroby Alzheimera. *Działalność Naukowa PAN (wybrane zagadnienia) II zeszyt*, **2003**, 69-71 [in Polish]
93. K.Żmudzka, T.Johansson, J.Stawinski, M.Wójcik, M.Janicka, B.Nawrot: Novel DNA Analogues with 2-, 3- and 4-Pyridinephosphonate Internucleotide Bonds - Synthesis, Structure, Hybridization Properties and Stability Against Exonucleolytic Degradation. *New J. Chem.* **2003**, 27(12), 1698-1705
94. M.Maszewska, J.Leclaire, M.Cieślak, B.Nawrot, A.Okruszek, A.-M.Caminade, J.-P.Majoral: Water-Soluble Polycationic Dendrimers with a Phosphoramidothioate Backbone – Preliminary Studies of Cytotoxicity and Oligonucleotide/Plasmid Delivery in Cell Culture. *Oligonucleotides* **2003**, 13(4), 193-205
95. M.Sierant, B.Nawrot: Charakterystyka zjawiska *RNA interference*, podstawy strukturalne i właściwości siRNA. *Wiadomości Chemiczne* **2003**, 57, 571-585 [in Polish]
96. B.Nawrot, S.Antoszczyk, M.Maszewska, T.Kuwabara, M.Warashina, K.Taira, W.J.Stec: Efficient Inhibition of β -Secretase (BACE) Gene Expression in HEK293T Cells by tRNA^{Val}/CTE-Driven Hammerhead Ribozymes. *Eur. J. Biochem.* **2003**, 270, 3962-3970
97. B.Nawrot, S.Antoszczyk, M.Sierant: Hamowanie ekspresji genów białek uczestniczących w wytwarzaniu beta-amyloidu jako perspektywa neuroprotekcji w chorobie Alzheimera. *Neuroprotekcja. XX Szkoła Zimowa Instytutu Farmakologii PAN, Mogilany* **2003**, Red. Maria Śmiałowska, str. 65-78 [in Polish]
98. B.Nawrot, S.Antoszczyk, M.Maszewska, G.Rebowski, T.Kuwabara, M. Warashina, K.Taira, W.J.Stec: Modulation of beta-Secretase Gene Expression by Action of Catalytic Nucleic Acids" *Nucleic Acids Res. Suppl. No 2*, **2002**, 105-106
99. E.Budzisz, J.Graczyk-Wojciechowska, R.Zieba, B.Nawrot: A New Series of 2-Substituted 3-Phosphonic Derivatives of Chromone. Part II. Synthesis, *in vitro* Alkylating and *in vivo* Antitumor Activity. *New J. Chem.* **2002**, 26, 1799-1804
100. B.Nawrot, O.Michalak, M.Nowak, A.Okruszek, M.Dera, W.J.Stec: Bis(hydroxymethyl)phosphinic Acid Analogues of Acyclic Nucleosides; Synthesis and Incorporation Into Short DNA Oligomers. *Tetrahedron Lett.* **2002**, 5397-5400
101. B.Nawrot, M.Sobczak, S.Antoszczyk: Synthesis of Dinucleoside (N3'→MeP5') Methanephosphonamidates. *Org. Lett.* **2002**, 4(10), 1799-1802
102. B.Nawrot: Catalytic DNA – Deoxyribozymes. *Postępy Biochemii* **2002**, 48(1), 20-33
103. B.Nawrot: Katalityczne kwasy nukleinowe. W: *Na pograniczu chemii i biologii* wyd. przez Uniwersytet Poznański (edytorzy prof. Barciszewski i prof. Koroniak), Tom V, **2002**, 26-52 [in Polish]
104. A.Schlosser, B.Nawrot, N.Grillenbeck, M.Sprinzl: Fluorescence-Monitored Conformational Change on the 3'-End of tRNA Upon Aminoacylation. *J. Biomol. Struc. Dynamics* **2001**, 19(2), 285-291
105. B.Nawrot, O.Michalak, S.Olejniczak, M.W.Wieczorek, T.Lis, W.J.Stec: Alkylation of Thymine with 1,2-Dibromoethane. *Tetrahedron* **2001**, 57, 3979-3985
106. B.Nawrot: Selekcja kwasów nukleinowych *in vitro*. *Wiadomości Chemiczne* **2000**, 54, (7-8), 617-636. [in Polish]

107. J.T.Stivers, B.Nawrot, G.J.Jagadeesh, W.J.Stec, S.Shuman: Stereochemical Outcome and Kinetic Effects of Rp and Sp-Phosphorothioate Substitutions at the Cleavage Site of Vaccinia Type I DNA Topoisomerase. *Biochemistry* **2000**, 39, 5561-5572
108. P.Acharya, B.Nawrot, M.Sprinzi, Ch.Thibaudeau, J.Chattopadhyaya: The Strength of the 3'-Gauche Effect Dictates the Structure of 3'-O-Antraniloyl Adenosine and Its 5'-Phosphate, Two Analogues of the 3'-End of Aminoacyl-tRNA. *J. Chem. Soc. Perkin Trans 2*, **1999**, 1531-1536
109. A.Schlosser, B.Blechsmidt, B.Nawrot, M.Sprinzi: Aminoacylation of tRNA Induces a Conformational Switch on the 3'-Terminal Ribose. In: *RNA Biochemistry and Biotechnology*, **1999**, J. Barciszewski and B.F.C. Clark (eds.). Kluwer Academic Publishers, pp 159-168
110. M.Boczkowska, B.Nawrot, W.J.Stec: Stereodifferentiation of Triple Helix Formation by P-chiral Chimeric Oligo(deoxyribonucleoside methanephosphonamidate)s and Double Stranded DNA. *J. Biomol. Struct. Dynamics* **1999**, 16(6), 1291
111. B.Nawrot, M.Boczkowska, M.Wójcik, M.Sochacki, S.Kaźmierski, W.J.Stec: Novel Internucleotide 3'-NH-P(CH₃)(O)-O-5' Linkage. Oligo(deoxyribonucleoside Methanephosphonamidate)s; Synthesis, Structure and Hybridization Properties. *Nucleic Acids Res.* **1998**, 26(11), 2650-1658
112. B.Nawrot, M.Sprinzi: Aminoacyl-tRNA Analogues; Synthesis, Purification and Properties of 3'-Anthraniloyl Oligoribonucleotides. *Nucleosides Nucleotides* **1998**, 17(4), 815-829
113. B.Nawrot, W.Milius, A.Ejchart, S.Limmer, M.Sprinzi: The Structure of 3'-O-Anthraniloyladenine, an Analogue of the 3'-End of Aminoacyl-tRNA. *Nucleic Acids Res.* **1997**, 25 (5), 948-954
114. B.Nawrot, R.Hillenbrand, S.Limmer, N.Grillenbeck, M.Sprinzi: Interaction of N-tosyl-L-phenylalanylchloromethane with *Thermus thermophilus* Elongation Factor Tu. *Eur. J. Biochem.* **1997**, 247, 59-65
115. S.Limmer, M.Vogtherr, B.Nawrot, R.Hillenbrand, M.Sprinzi: Specific Recognition of a Minimal Model of Aminoacylated tRNA by the Elongation Factor Tu of Bacterial Protein Biosynthesis. *Angew. Chem. Int. Ed. Engl.* **1997**, 36(22), 2485-2489
116. J.W.Stuart, M.M.Basti, W.Smith, B.Forrest, R.Guenther, H.Sierzputowska-Gracz, B.Nawrot, A.Malkiewicz, P.F.Agris: Structure of Trinucleotide Dp(acp)³UpA with Coordinated Mg⁺² Demonstrates that Modified Nucleosides Contribute to Regional Conformations of tRNA. *Nucleosides Nucleotides* **1996**, 15(5), 1009-1028
117. B.Nawrot, P.Hoffmüller, M.Sprinzi: Synthesis of Ribonucleoside 5'-Triphosphates Derived from 2-Thiocyridine, 4-Thiouridine and 5-Bromocyridine. *Chemical Papers* **1996**, 50(3), 151-155
118. P.F.Agris, A.Malkiewicz, A.Kraszewski, K.Everett, B.Nawrot, E.Sochacka, J.Jankowska, R.Guenther: Site-Selected Introduction of Modified Purine and Pyrimidine Ribonucleosides into RNA by Automated Phosphoramidite Chemistry. *Biochimie* **1995**, 77, 125-134
119. B.Nawrot, A.Malkiewicz, W.Smith, H.Sierzputowska-Gracz, P.F.Agris: RNA Modified Uridines VII: Chemical Synthesis and Initial Analysis of tRNA D-Loop Oligomers with Tandem Modified Uridines. *Nucleosides Nucleotides* **1995**, 14(1 & 2), 143-165
120. T.Kowalik-Jankowska, H.Kozłowski, I.Sovago, B.Nawrot, E.Sochacka, A.Malkiewicz: Metal Binding Ability of Hypermodified Nucleosides of tRNA. II. Copper (II) Complexes of Uridine and Thiouridine Derivatives. *J. Inorg. Biochem.* **1994**, 53, 49-56
121. R.H.Guenther, R.S.Bakal, B.Forrest, Y.Chen, R.Sengupta, B.Nawrot, E.Sochacka, J.Jankowska, A.Kraszewski, A.Malkiewicz, P.F.Agris: Aminoacyl-tRNA-Synthetase and U₅₄ Methyltransferase Recognize Conformations of the Yeast tRNA^{Phe} Anticodon and T Stem / Loop Domain. *Biochimie* **1994**, 76, 1143-1151
122. V.Dao, R.Guenther, A.Malkiewicz, B.Nawrot, E.Sochacka, J.Jankowska, A.Kraszewski, K.Everett, P.F.Agris: Ribosome Binding of DNA Analogs of tRNA Requires Base Modifications and Supports the "Extended Anticodon". *Proc. Natl. Acad. Sci. USA* **1994**, 91, 2125 - 2129
123. M.W.Wieczorek, D.A.Adamiak, G.D.Bujacz, A.Malkiewicz, B.Nawrot: RNAs Modified Components. The Molecular and Crystal Structure of 5-Carboxymethylaminomethyl-2-thiouridine (s²cmnm⁵U). *Heteroatom Chem.* **1994**, 5(4), 375-384

124. P.F.Agris, K.Everett, R.H.Guenther, A.Malkiewicz, B.Nawrot, E.Sochacka: tRNA Modified Components: the Solid-Phase Synthesis of the Heptadecamers Related to the tRNA (Phe, Glu) Anticodon Arm. *Collect. Czech. Chem. Commun.*, **1993**, 58(1), 195-199
125. B.Nawrot, A.Malkiewicz: RNA Modified Uridines. V. An Improved Synthesis of 3-[3-(S)-amino-3-carboxypropyl]uridine (acp³U) and Its 5'-Phosphate. *Nucleosides Nucleotides* **1992**, 11(8), 1455-1461
126. W.S.Smith, B.Nawrot, A.Malkiewicz, P.F.Agris: RNA Modified Uridines. VI. Conformations of 3[3-(S)-amino-3-carboxypropyl]uridine (acp³U) from tRNA and 1-methyl-3-[3-(S)-amino-3-carboxypropyl]pseudouridine (m¹acp³U) from rRNA. *Nucleosides Nucleotides* **1992**, 11(10), 1683-1694
127. P.F.Agris, H.Sierzputowska-Gracz, W.Smith, A.Malkiewicz, E.Sochacka, B.Nawrot: Thiolation of Uridine Carbon-2 Restricts the Motional Dynamics of the Transfer RNA Wobble Position Nucleoside. *J. Am. Chem. Soc.* **1992**, 114, 2652 – 2656
128. Z.Galdecki, B.Luciak, B.Nawrot, A.Malkiewicz: Krystalstruktur und Konformation 5-Carboxymethylaminomethyluridin Monohydrat. *Monatsh. Chem.* **1991**, 122, 487-493
129. J.Krzeminski, B.Nawrot, K.W.Pankiewicz, K.A.Watanabe: Synthesis of 9-(2-Deoxy-2-fluoro-β-D-arabinofuranosyl)hypoxantines. The First Direct Introduction of a 2'-β-Fluoro Substituent in Purine Nucleosides. Studies Directed Toward the Synthesis of 2'-Deoxy-2'-substituted arabino nucleosides. *Nucleosides Nucleotides* **1991**, 10(4), 781-798
130. E.Sochacka, B.Nawrot, K.W.Pankiewicz, K.A.Watanabe: Synthesis of 1-Methyl-5-(3-azido-2,3-dideoxy-β-D-erythro-penta furanosyl)uracil and 1-Methyl-5-(3-azido-2,3-dideoxy-2-fluoro-β-D-arabinofuranosyl)uracil. The C-Nucleoside Isostere of 3'-Azido-3'-deoxythymine and Its 2'-"Up"-Fluoro Analogue" *J. Med. Chem.* **1990**, 33, 1995-1999
131. B.Nawrot, A.Malkiewicz: The tRNA "wobble" Position Uridines. III. The Synthesis of 5-[S-Methoxycarbonyl(hydroxy)methyl]uridine and Its 2-Thio Analogue. *Nucleosides Nucleotides* **1989**, 8(8), 1499-1512
132. B.Nawrot, K.W.Pankiewicz, R.Zepf, K.A.Watanabe: Synthesis and Reactivity of Benzyl 2-O-trifluoromethylsulfonyl- and Benzyl 3-O-trifluoromethyl Sulfonyl-β-D-ribofuranoside - The First Evidence of Trifluoromethyl Sulfonyl (Triflyl) Migration in Carbohydrates. *J. Carbohydr. Chem.* **1988**, 7(1), 95-114
133. K.W.Pankiewicz, B.Nawrot, H.Gadler, R.W.Price, K.A.Watanabe: Nucleosides. 146. 1-Methyl-5-(2-deoxy-2-fluoro-β,D-arabino furanosyl) Uracil, the C-Nucleoside Isostere of the Potent Antiviral Agent 1-(2-Deoxy-2-fluoro-β,D-arabinofuranosyl)thymine (FMAU). Studies Directed Toward the Synthesis of 2'-Deoxy-2'-Substituted Arabino Nucleosides. 6. *J. Med. Chem.* **1987**, 30, 2314-2316
134. A.J.Malkiewicz, B.Nawrot, E.Sochacka: The Synthesis of tRNA sup (UGA) Anticodons with the 2-Thio Uridine Derivatives as the "First Letter". *Nucleic Acids Res., Symp. Series* **1987**, (18), 97-100
135. K.W.Pankiewicz, B.Nawrot, E.Sochacka, K.A.Watanabe: Studies Directed Toward the Synthesis of 2'-Deoxy-2'-substituted Arabino Nucleosides. *Nucleic Acids Res., Symp. Series* **1987**, (18), 257-260
136. A.J.Malkiewicz, B.Nawrot, E.Sochacka: Transformation of Some tRNA "Wobble" Uridines to Their 2-Thio Analogues. *Z.Naturforsch.* **1987**, 42b, 360-366
137. A.J.Malkiewicz, B.Nawrot: The 2-Thio Analogues of tRNA Components Derived from 5-Hydroxyuridine. *Z. Naturforsch.* **1987**, 42b, 355-359
138. K.W.Pankiewicz, B.C.Nawrot, K.A.Watanabe: Trifluoromethylsulfonyl (Tryflyl) Migration. Synthesis of 6,3'-Anhydro-3-benzyl-1-(5-chloro-5-deoxy-β,D-xylofuranosyl) Barbituric Acid from the 2' Trifluoromethanesulfonate (Triflate) of 6,5'-Anhydro-3-benzyl-1-β,D-ribofuranosyl Barbituric Acid. *J. Org. Chem.* **1986**, 51, 1525-1529
139. A.Malkiewicz, B.Nawrot, G.Mina: The Synthesis of the 2-Thio Analogues of the "Wobble Nucleosides" tRNA Derived from 5-Hydroxyuridine. *Third International Conference on Chemistry and Biotechnology of Biologically Active Natural Products, Sofia, Bulgaria*, **1985**, 5, 394-398