# Valery Belakhov

## List of Publications by Year in descending order



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|---|---|---|---|
| 105 papers | 2,866 citations | 136885 32 h-index | 182361 51 g-index |
| 117 all docs | 117 docs citations | 117 times ranked | 2568 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Development of Novel Aminoglycoside (NB54) with Reduced Toxicity and Enhanced Suppression of Disease-Causing Premature Stop Mutations. Journal of Medicinal Chemistry, 2009, 52, 2836-2845. | 2.9 | 169 |
| 2 | Design, Synthesis, and Evaluation of Novel Fluoroquinoloneâ"Aminoglycoside Hybrid Antibiotics. Journal of Medicinal Chemistry, 2009, 52, 2243-2254. | 2.9 | 131 |
| 3 | Synthetic Aminoglycosides Efficiently Suppress Cystic Fibrosis Transmembrane Conductance Regulator Nonsense Mutations and Are Enhanced by Ivacaftor. American Journal of Respiratory Cell and Molecular Biology, 2014, 50, 805-816. | 1.4 | 131 |
| 4 | Crystal structure and snapshots along the reaction pathway of a family 51 Â-L-arabinofuranosidase. EMBO Journal, 2003, 22, 4922-4932. | 3.5 | 127 |
| 5 | Repairing faulty genes by aminoglycosides: Development of new derivatives of geneticin (G418) with enhanced suppression of diseases-causing nonsense mutations. Bioorganic and Medicinal Chemistry, 2010, 18, 3735-3746. | 1.4 | 118 |
| 6 | Designer Aminoglycosides That Selectively Inhibit Cytoplasmic Rather than Mitochondrial Ribosomes Show Decreased Ototoxicity. Journal of Biological Chemistry, 2014, 289, 2318-2330. | 1.6 | 97 |
| 7 | A comparative evaluation of NB30, NB54 and PTC124 in translational readâ€through efficacy for treatment of an USH1C nonsense mutation. EMBO Molecular Medicine, 2012, 4, 1186-1199. | 3.3 | 95 |
| 8 | Biochemical Characterization and Identification of the Catalytic Residues of a Family 43 Î²-d-Xylosidase fromGeobacillus stearothermophilusT-6â€. Biochemistry, 2005, 44, 387-397. | 1.2 | 93 |
| 9 | Readthrough of nonsense mutations in Rett syndrome: evaluation of novel aminoglycosides and generation of a new mouse model. Journal of Molecular Medicine, 2011, 89, 389-398. | 1.7 | 90 |
| 10 | Attenuation of Nonsense-Mediated mRNA Decay Enhances In Vivo Nonsense Suppression. PLoS ONE, 2013, 8, e60478. | 1.1 | 89 |
| 11 | Detailed Kinetic Analysis and Identification of the Nucleophile in Î±-l-Arabinofuranosidase from Geobacillus stearothermophilus T-6, a Family 51 Glycoside Hydrolase. Journal of Biological Chemistry, 2002, 277, 43667-43673. | 1.6 | 83 |
| 12 | Characterization of new-generation aminoglycoside promoting premature termination codon readthrough in cancer cells. RNA Biology, 2017, 14, 378-388. | 1.5 | 74 |
| 13 | The identification of the acid-base catalyst of Î±-arabinofuranosidase fromGeobacillus stearothermophilusT-6, a family 51 glycoside hydrolase. FEBS Letters, 2002, 514, 163-167. | 1.3 | 72 |
| 14 | Suppression of CFTR premature termination codons and rescue of CFTR protein and function by the synthetic aminoglycoside NB54. Journal of Molecular Medicine, 2011, 89, 1149-1161. | 1.7 | 67 |
| 15 | The designer aminoglycoside NB84 significantly reduces glycosaminoglycan accumulation associated with MPS I-H in the Idua-W392X mouse. Molecular Genetics and Metabolism, 2012, 105, 116-125. | 0.5 | 67 |
| 16 | Dual Effect of Synthetic Aminoglycosides: Antibacterial Activity againstBacillus anthracis and Inhibition of Anthrax Lethal Factor. Angewandte Chemie - International Edition, 2005, 44, 447-452. | 7.2 | 63 |
| 17 | Stereochemistry of the KDO8P synthase. An efficient synthesis of the 3-fluoro analogues of KDO8P. Bioorganic and Medicinal Chemistry Letters, 1993, 3, 1577-1582. | 1.0 | 61 |
| 18 | Increased Selectivity toward Cytoplasmic versus Mitochondrial Ribosome Confers Improved Efficiency of Synthetic Aminoglycosides in Fixing Damaged Genes: A Strategy for Treatment of Genetic Diseases Caused by Nonsense Mutations. Journal of Medicinal Chemistry, 2012, 55, 10630-10643. | 2.9 | 57 |

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|---|---|---|---|
| 19 | A New Class of Branched Aminoglycosides:â€‰ Pseudo-Pentasaccharide Derivatives of Neomycin B. Organic Letters, 2003, 5, 3575-3578. | 2.4 | 56 |
| 20 | Detailed Kinetic Analysis of a Family 52 Glycoside Hydrolase:â€‰ A Î²-Xylosidase from Geobacillus stearothermophilus. Biochemistry, 2003, 42, 10528-10536. | 1.2 | 54 |
| 21 | Identification of the Catalytic Residues in Family 52 Glycoside Hydrolase, a Î²-Xylosidase from Geobacillus stearothermophilus T-6. Journal of Biological Chemistry, 2003, 278, 26742-26749. | 1.6 | 53 |
| 22 | New inducible genetic method reveals critical roles of GABA in the control of feeding and metabolism. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3645-3650. | 3.3 | 53 |
| 23 | Crystal Structures of KDOP Synthase in Its Binary Complexes with the Substrate Phosphoenolpyruvate and with a Mechanism-Based Inhibitorâ€,â€¡. Biochemistry, 2001, 40, 6326-6334. | 1.2 | 50 |
| 24 | Beneficial Read-Through of aUSH1CNonsense Mutation by Designed Aminoglycoside NB30 in the Retina. , 2010, 51, 6671. | | 50 |
| 25 | Towards the development of novel antibiotics: synthesis and evaluation of a mechanism-based inhibitor of Kdo8P synthase. Bioorganic and Medicinal Chemistry, 1999, 7, 2671-2682. | 1.4 | 49 |
| 26 | Catalytic mechanism of 3-deoxy-d-manno-2-octulosonate-8-phosphate synthase. The use of synthetic analogues to probe the structure of the putative reaction intermediate. FEBS Journal, 1993, 217, 991-999. | 0.2 | 44 |
| 27 | Long-term nonsense suppression therapy moderates MPS I-H disease progression. Molecular Genetics and Metabolism, 2014, 111, 374-381. | 0.5 | 44 |
| 28 | Covalently linked kanamycin â€“ Ciprofloxacin hybrid antibiotics as a tool to fight bacterial resistance. Bioorganic and Medicinal Chemistry, 2017, 25, 2917-2925. | 1.4 | 42 |
| 29 | Stereochemistry of family 52 glycosyl hydrolases: a Î²-xylosidase fromBacillus stearothermophilusT-6 is a retaining enzyme. FEBS Letters, 2001, 495, 39-43. | 1.3 | 41 |
| 30 | Branched aminoglycosides: Biochemical studies and antibacterial activity of neomycin B derivatives. Bioorganic and Medicinal Chemistry, 2005, 13, 5797-5807. | 1.4 | 37 |
| 31 | Glutamic acid 160 is the acid-base catalyst of Î²-xylosidase fromBacillus stearothermophilusT-6: a family 39 glycoside hydrolase. FEBS Letters, 2001, 495, 115-119. | 1.3 | 36 |
| 32 | Inhibition Mode of a Bisubstrate Inhibitor of KDO8P Synthase:â€‰ A Frequency-Selective REDOR Solid-State and Solution NMR Characterization. Journal of the American Chemical Society, 2003, 125, 4662-4669. | 6.6 | 33 |
| 33 | Insight into the catalytic mechanism of KDO8P synthase. Synthesis and evaluation of the isosteric phosphonate mimic of the putative cyclic intermediate. Bioorganic and Medicinal Chemistry Letters, 1993, 3, 1583-1588. | 1.0 | 32 |
| 34 | Design of Novel Aminoglycoside Derivatives with Enhanced Suppression of Diseases-Causing Nonsense Mutations. ACS Medicinal Chemistry Letters, 2016, 7, 418-423. | 1.3 | 32 |
| 35 | Synthesis and evaluation of a mechanism-based inhibitor of KDO8P synthase. Carbohydrate Research, 2004, 339, 385-392. | 1.1 | 29 |
| 36 | An efficient chemical-enzymatic synthesis of 4-nitrophenyl Î²-xylobioside: a chromogenic substrate for xylanases. Carbohydrate Research, 1997, 304, 111-115. | 1.1 | 28 |

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|---|---|---|---|
| 37 | Structural basis for selective targeting of leishmanial ribosomes: aminoglycoside derivatives as promising therapeutics. Nucleic Acids Research, 2015, 43, 8601-8613. | 6.5 | 28 |
| 38 | Overproduction and characterization of seleno-methionine xylanase T-6. Journal of Biotechnology, 2000, 78, 83-86. | 1.9 | 26 |
| 39 | Repairing faulty genes by aminoglycosides: Identification of new pharmacophore with enhanced suppression of disease-causing nonsense mutations. MedChemComm, 2011, 2, 165. | 3.5 | 21 |
| 40 | Aminoglycoside-Induced Premature Stop Codon Read-Through of Mucopolysaccharidosis Type I Patient Q70X and W402X Mutations in Cultured Cells. JIMD Reports, 2013, 13, 139-147. | 0.7 | 16 |
| 41 | Development of generic immunoassay for the detection of a series of aminoglycosides with 6â€²-OH group for the treatment of genetic diseases in biological samples. Journal of Pharmaceutical and Biomedical Analysis, 2013, 75, 33-40. | 1.4 | 15 |
| 42 | Crystal Structures of Escherichia coli KDO8P Synthase Complexes Reveal the Source of Catalytic Irreversibility. Journal of Molecular Biology, 2005, 351, 641-652. | 2.0 | 14 |
| 43 | Polyene Macrolide Antibotic Derivatives: Preparation, Overcoming Drug Resistance, and Prospects for Use in Medical Practice (Review). Pharmaceutical Chemistry Journal, 2019, 52, 890-901. | 0.3 | 14 |
| 44 | 1-(Dihydroxyphosphynyl)vinyl phosphate: The phosphonate analogue of phosphoenolpyruvate is a pH-dependent substrate of Kdo8P synthase. Bioorganic and Medicinal Chemistry Letters, 1996, 6, 2901-2906. | 1.0 | 12 |
| 45 | First Nonenzymatic Synthesis of Kdo8P through a Mechanism Similar to That Suggested for the Enzyme Kdo8P Synthase. Journal of Organic Chemistry, 1997, 62, 794-804. | 1.7 | 11 |
| 46 | Synthesis of hydrophospohoryl derivatives of the antifungal antibiotic pimaricin by the Kabachnik-Fields reaction. Russian Journal of General Chemistry, 2008, 78, 305-312. | 0.3 | 11 |
| 47 | Results of Examination of the Biological Activity of Nonmedical Antibiotics with a View to Finding Environmentally Friendly Pesticides for Plant Protection. Russian Journal of General Chemistry, 2018, 88, 2982-2989. | 0.3 | 10 |
| 48 | Nystatin: Methods of preparation, search for derivatives, and prospects for medicinal use (review). Pharmaceutical Chemistry Journal, 1993, 27, 84-92. | 0.3 | 9 |
| 49 | Towards the synthesis of the putative reaction intermediate in the Kdo8P synthase-catalyzed reaction. Synthesis and evaluation of 3-deoxy--manno-2-octulosonate-2-phosphate. Tetrahedron Letters, 1994, 35, 3179-3182. | 0.7 | 9 |
| 50 | Synthesis of novel phosphonate analogue of Kdo as a tool for the design of potent inhibitors for lipopolysaccharide biosynthesis. Tetrahedron Letters, 1994, 35, 5077-5080. | 0.7 | 8 |
| 51 | Towards a new class of synthetic antibacterials acting on lipopolysaccharide biosynthesis. Drug Development Research, 2000, 50, 416-424. | 1.4 | 8 |
| 52 | Family of thiomercuric derivatives of sugars: Synthesis, fungicidal/herbicidal activity, and application to the X-ray structure determination of the corresponding enzymes. Israel Journal of Chemistry, 2000, 40, 177-188. | 1.0 | 8 |
| 53 | The Use of (E)- and (Z)-Phosphoenol-3-fluoropyruvate as Mechanistic Probes Reveals Significant Differences between the Active Sites of KDO8P and DAHP Synthasesâ€. Biochemistry, 2005, 44, 7326-7335. | 1.2 | 8 |
| 54 | Polyene macrolide antibiotics: Mechanisms of inactivation, ways of stabilization, and methods of disposal of unusable drugs (Review). Russian Journal of General Chemistry, 2015, 85, 2985-3001. | 0.3 | 8 |

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| 55 | The application of aryl substituted derivatives of xylose as environmentally friendly multipurpose pesticides. Russian Journal of General Chemistry, 2016, 86, 3002-3007. | 0.3 | 8 |
| 56 | Study of the Insecticidal Activity of Aryl Substituted Derivatives of Xylose and of Xylobiose in the Search for Environmentally Friendly Pesticides. Russian Journal of General Chemistry, 2017, 87, 3151-3155. | 0.3 | 8 |
| 57 | Synthesis and antifungal activity of N-benzyl derivatives of amphotericin B. Pharmaceutical Chemistry Journal, 2007, 41, 362-366. | 0.3 | 7 |
| 58 | Syntesis, antifungal and antiviral activity of hydrophosphoryl derivatives of lucensomycin. Russian Journal of Applied Chemistry, 2012, 85, 1454-1465. | 0.1 | 7 |
| 59 | Towards Catalytic Antibiotics: Redesign of Aminoglycosides To Catalytically Disable Bacterial Ribosomes. ChemBioChem, 2019, 20, 247-259. | 1.3 | 7 |
| 60 | Catalytic Mechanism of 3-Deoxy-D-manno-2-octulosonate-8-phosphate Synthase. Current Organic Chemistry, 2001, 5, 127-138. | 0.9 | 7 |
| 61 | Application of the Toddâ€“Atherton synthetic approach for chemical modification of tetraene macrolide antibiotic lucensomycin. Russian Journal of General Chemistry, 2016, 86, 570-578. | 0.3 | 6 |
| 62 | Synthesis and Insecticidal Activity of 5-C-Phosphonate Derivatives of Aryl-1-thio-Î²-D-ribofuranoside. Russian Journal of General Chemistry, 2020, 90, 1845-1852. | 0.3 | 6 |
| 63 | Ecological Aspects of Application of Tetraene Macrolide Antibiotic Tetramycin in Agriculture and Food Industry (A Review). Russian Journal of General Chemistry, 2021, 91, 2858-2880. | 0.3 | 6 |
| 64 | Synthesis, antifungal, and antiviral activity of hydrophosphoryl derivatives of mycoheptin. Pharmaceutical Chemistry Journal, 2007, 41, 314-318. | 0.3 | 5 |
| 65 | The application of microfine ionites for the improvement of the efficiency of sorption processes in drug production (Review). Russian Journal of Applied Chemistry, 2010, 83, 1683-1689. | 0.1 | 5 |
| 66 | Chemical modification of heptaene macrolide antibiotic Amphotericin B under conditions of the Atherton-Todd reaction. Russian Journal of General Chemistry, 2014, 84, 1953-1961. | 0.3 | 5 |
| 67 | Directions of practical application of mycelial wastes of microbiological production of antibiotics in various areas of industry and agriculture (Review). Russian Journal of General Chemistry, 2014, 84, 2664-2676. | 0.3 | 5 |
| 68 | Imbricin, an Antifungal Antibiotic of Non-Medical Application: Preparation, Physicochemical Properties, Structural Features, and Industrial and Agricultural Uses (Review). Russian Journal of General Chemistry, 2017, 87, 3220-3232. | 0.3 | 5 |
| 69 | Hydrophosphoryl derivatives of tetramycin B: Design, synthesis, biological activity and development of intellectual computer system. Phosphorus, Sulfur and Silicon and the Related Elements, 2019, 194, 442-443. | 0.8 | 5 |
| 70 | Synthesis and Insecticidal Activity of Î²-D-Ribofuranoside Phosphate Derivatives. Russian Journal of General Chemistry, 2020, 90, 1249-1254. | 0.3 | 5 |
| 71 | Toward Catalytic Antibiotics: Redesign of Fluoroquinolones to Catalytically Fragment Chromosomal DNA. ACS Infectious Diseases, 2021, 7, 608-623. | 1.8 | 5 |
| 72 | Synthesis of potential drugs based on hydrophosphoryl compounds. IV. Synthesis and antifungal activity of unsaturated organophosphorus compounds. Pharmaceutical Chemistry Journal, 1983, 17, 866-872. | 0.3 | 4 |

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| 73 | Synthesis and antifungal activity of N-trialkylsilyl derivatives of nystatin. Pharmaceutical Chemistry Journal, 2008, 42, 322-325. | 0.3 | 4 |
| 74 | Synthesis and biological activity of hydrophosphoryl derivatives of nystatin. Pharmaceutical Chemistry Journal, 1991, 25, 809-813. | 0.3 | 3 |
| 75 | Preliminary crystallographic analysis of Xyn52B2, a GH52 Î²-<scp>D</scp>-xylosidase fromGeobacillus stearothermophilusT6. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 1675-1682. | 0.4 | 3 |
| 76 | Synthesis of Î²-D-xylopyranoside thiophosphate derivatives. Russian Journal of General Chemistry, 2017, 87, 456-462. | 0.3 | 3 |
| 77 | SEARCH FOR NEW DERIVATIVES OF POLYENE MACROLIDE ANTIBIOTICS AS POTENTIAL ANTIFUNGAL AGENTS FOR THE DELAYING OF DRUG RESISTANCE AND TREATMENT OF INVASIVE MYCOSES (review). Bulletin of the Saint Petersburg State Institute of Technology (Technical University), 2015, 56, 31-40. | 0.0 | 3 |
| 78 | Preparation and Insecticidal Activity of the First Organofluorine Insecticide Based on Î²-D-Ribofuranoside Monosaccharide. Russian Journal of General Chemistry, 2021, 91, 2900-2907. | 0.3 | 3 |
| 79 | Synthesis and biological activity of rifamycin SV 1,2-alkadiene phosphinates. Pharmaceutical Chemistry Journal, 1984, 18, 704-707. | 0.3 | 2 |
| 80 | Synthesis of potential drugs based on hydrophosphoryl compounds. Pharmaceutical Chemistry Journal, 1985, 19, 780-788. | 0.3 | 2 |
| 81 | Synthesis and antiviral activity of 1,2-oxaphosphol-3-enes. Pharmaceutical Chemistry Journal, 1988, 22, 486-491. | 0.3 | 2 |
| 82 | Synthesis and pesticide activity of the organophosphorus derivatives of antimycin A. Pharmaceutical Chemistry Journal, 1996, 30, 523-526. | 0.3 | 2 |
| 83 | Organofluorine derivatives of nystatin. Pharmaceutical Chemistry Journal, 1998, 32, 109-110. | 0.3 | 2 |
| 84 | Synthesis and antifungal activity of N-aryl-substituted pimaricin derivatives. Pharmaceutical Chemistry Journal, 2010, 44, 486-492. | 0.3 | 2 |
| 85 | Kabachnik-fields phosphorylation of tetraene macrolide antibiotic pimaricin. Russian Journal of General Chemistry, 2015, 85, 409-417. | 0.3 | 2 |
| 86 | Synthesis and Antifungal and Antiviral Activity of N-Benzyl Derivatives of the Tetraene Macrolide Antibiotic Lucensomycin. Pharmaceutical Chemistry Journal, 2016, 50, 143-151. | 0.3 | 2 |
| 87 | Computer-aided solution for intellectual analysis and judicious selection of medically advanced antifungals synthesis conditions. , 2017, , . | | 2 |
| 88 | Study of the Plant Growth-Regulating Activity of Non-Medical Application Antibiotics with the Aim of Finding Eco-Friendly Plant Growth Regulators. Russian Journal of General Chemistry, 2019, 89, 2827-2834. | 0.3 | 2 |
| 89 | Cross-utilization of Î²-galactosides and cellobiose in Geobacillus stearothermophilus. Journal of Biological Chemistry, 2020, 295, 10766-10780. | 1.6 | 2 |
| 90 | Practical Applications of Tetraene Macrolide Antibiotic Lucensomycin as an Eco-Friendly Fungicide. Russian Journal of General Chemistry, 2020, 90, 2632-2649. | 0.3 | 2 |

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| 91 | Regeneration of FAF and AV-17I anion exchange resins after absorption purification of ?-amylase fromBacillus subtilis. Pharmaceutical Chemistry Journal, 1983, 17, 369-371. | 0.3 | 1 |
| 92 | Synthesis and antiviral activity of hydrophosphorylated inosines. Pharmaceutical Chemistry Journal, 1990, 24, 651-656. | 0.3 | 1 |
| 93 | Methyl 2,3-dideoxy-2-S-methylmercurio-2-thio-Î²-D-manno-oct-2-ulopyranosonate-(2,6). Acta Crystallographica Section C: Crystal Structure Communications, 2002, 58, m450-m452. | 0.4 | 1 |
| 94 | Chemical modification of tetraene macrolide antibiotic nystatin A1 with organophosphorus alcohols. Russian Journal of General Chemistry, 2014, 84, 295-297. | 0.3 | 1 |
| 95 | The application of mycelial wastes from microbiological production of antibacterial antibiotics as lubricating oil additives. Russian Journal of General Chemistry, 2016, 86, 2929-2932. | 0.3 | 1 |
| 96 | Synthesis and Antifungal Activity of N-Benzyl Derivatives of Tetramycin B. Russian Journal of General Chemistry, 2021, 91, 1028-1038. | 0.3 | 1 |
| 97 | A kinetic-dynamic analysis of the sorption of the pigment substances of amilosubtilin by anion-exchangers. Pharmaceutical Chemistry Journal, 1982, 16, 489-492. | 0.3 | 0 |
| 98 | Synthesis and antifungal activity of organofluorine derivatives of levorin. Pharmaceutical Chemistry Journal, 2007, 41, 480-482. | 0.3 | 0 |
| 99 | A new non-chloride method of synthesis of antibacterial antibiotic fosfomycin based on the principles of green chemistry. Russian Journal of General Chemistry, 2016, 86, 2974-2977. | 0.3 | 0 |
| 100 | A New Sorption Method for the Production of Bacillus subtilis Î±-Amylase with the Use of FAF Microfine Anion Exchanger. Russian Journal of General Chemistry, 2017, 87, 3115-3122. | 0.3 | 0 |
| 101 | Influence of Aryl-Substituted Xylose Derivatives on Fermentation of Antifungal Antibiotic Imbricin. Russian Journal of General Chemistry, 2018, 88, 2829-2836. | 0.3 | 0 |
| 102 | Imbricin, an Antibiotic of Nonmedical Application: Biological Activity, Environmental Friendliness, and Prospects for Use in Plant Protection. Russian Journal of General Chemistry, 2018, 88, 2937-2947. | 0.3 | 0 |
| 103 | Levoristatin, Non-Medical Application Antibiotic: Preparation, Physicochemical Properties, Structure, and Directions of Practical Usage (Review). Russian Journal of General Chemistry, 2019, 89, 2774-2785. | 0.3 | 0 |
| 104 | 10.1007/s11176-008-2021-y. , 2010, 78, 305. | | 0 |
| 105 | Heptaene Macrolide Antibiotic Perimycin: Preparation, Physicochemical Properties, Structure, Biological Activity, and Application in Agriculture as an Eco-Friendly Fungicide (A Review). Russian Journal of General Chemistry, 2021, 91, 2943-2952. | 0.3 | 0 |