

Ivan V Smirnov

List of Publications by Year in descending order

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Version: 2024-02-01

69
papers

1,336
citations

393982

19
h-index

377514

34
g-index

73
all docs

73
docs citations

73
times ranked

1693
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Microfluidic droplet platform for ultrahigh-throughput single-cell screening of biodiversity. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2550-2555. | 3.3 | 182 |
| 2 | Genetically encodable bioluminescent system from fungi. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12728-12732. | 3.3 | 130 |
| 3 | Chemical polysialylation of human recombinant butyrylcholinesterase delivers a long-acting bioscavenger for nerve agents in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 1243-1248. | 3.3 | 79 |
| 4 | Ultrahigh-throughput functional profiling of microbiota communities. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9551-9556. | 3.3 | 79 |
| 5 | Combinatorial antibody library from multiple sclerosis patients reveals antibodies that cross-react with myelin basic protein and EBV antigen. FASEB Journal, 2011, 25, 4211-4221. | 0.2 | 70 |
| 6 | Liposome-encapsulated peptides protect against experimental allergic encephalitis. FASEB Journal, 2013, 27, 222-231. | 0.2 | 55 |
| 7 | Reactibodies generated by kinetic selection couple chemical reactivity with favorable protein dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 15954-15959. | 3.3 | 48 |
| 8 | Strategies for induction of catalytic antibodies toward HIV-1 glycoprotein gp120 in autoimmune prone mice. Molecular Immunology, 2009, 47, 87-95. | 1.0 | 45 |
| 9 | Formation of homophily in academic performance: Students change their friends rather than performance. PLoS ONE, 2017, 12, e0183473. | 1.1 | 44 |
| 10 | Design of Targeted B Cell Killing Agents. PLoS ONE, 2011, 6, e20991. | 1.1 | 41 |
| 11 | Ubiquitin-independent proteosomal degradation of myelin basic protein contributes to development of neurodegenerative autoimmunity. FASEB Journal, 2015, 29, 1901-1913. | 0.2 | 39 |
| 12 | Anti-Idiotypic Antibody Mimics Proteolytic Function of Parent Antigen. Biochemistry, 2007, 46, 14598-14609. | 1.2 | 34 |
| 13 | Multiple Sclerosis Autoantigen Myelin Basic Protein Escapes Control by Ubiquitination during Proteasomal Degradation. Journal of Biological Chemistry, 2014, 289, 17758-17766. | 1.6 | 31 |
| 14 | CD206-Targeted Liposomal Myelin Basic Protein Peptides in Patients with Multiple Sclerosis Resistant to First-Line Disease-Modifying Therapies: A First-in-Human, Proof-of-Concept Dose-Escalation Study. Neurotherapeutics, 2016, 13, 895-904. | 2.1 | 30 |
| 15 | A novel expression cassette delivers efficient production of exclusively tetrameric human butyrylcholinesterase with improved pharmacokinetics for protection against organophosphate poisoning. Biochimie, 2015, 118, 51-59. | 1.3 | 25 |
| 16 | Strategies for the selection of catalytic antibodies against organophosphorus nerve agents. Chemico-Biological Interactions, 2013, 203, 196-201. | 1.7 | 24 |
| 17 | Heavy-light chain interrelations of MS-associated immunoglobulins probed by deep sequencing and rational variation. Molecular Immunology, 2014, 62, 305-314. | 1.0 | 23 |
| 18 | Administration of Myelin Basic Protein Peptides Encapsulated in Mannosylated Liposomes Normalizes Level of Serum TNF- α and IL-2 and Chemoattractants CCL2 and CCL4 in Multiple Sclerosis Patients. Mediators of Inflammation, 2016, 2016, 1-8. | 1.4 | 23 |

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|----|--|-----|-----------|
| 19 | Role of λ light-chain constant-domain switch in the structure and functionality of A17 reactibody. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014, 70, 708-719. | 2.5 | 22 |
| 20 | Parents mention sons more often than daughters on social media. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 2039-2041. | 3.3 | 21 |
| 21 | Charge-mediated proteasome targeting. <i>FASEB Journal</i> , 2019, 33, 6852-6866. | 0.2 | 19 |
| 22 | Immunoproteasome enhances intracellular proteolysis of myelin basic protein. <i>Doklady Biochemistry and Biophysics</i> , 2013, 453, 300-303. | 0.3 | 17 |
| 23 | A kinase bioscavenger provides antibiotic resistance by extremely tight substrate binding. <i>Science Advances</i> , 2020, 6, eaaz9861. | 4.7 | 17 |
| 24 | Drift of the Subgingival Periodontal Microbiome during Chronic Periodontitis in Type 2 Diabetes Mellitus Patients. <i>Pathogens</i> , 2021, 10, 504. | 1.2 | 16 |
| 25 | Robotic QM/MM-driven maturation of antibody combining sites. <i>Science Advances</i> , 2016, 2, e1501695. | 4.7 | 15 |
| 26 | Deep Functional Profiling Facilitates the Evaluation of the Antibacterial Potential of the Antibiotic Amicoumacin. <i>Antibiotics</i> , 2020, 9, 157. | 1.5 | 14 |
| 27 | Shielding of Cytokine Induction by the Periodontal Microbiome in Patients with Periodontitis Associated with Type 2 Diabetes Mellitus. <i>Acta Naturae</i> , 2019, 11, 79-87. | 1.7 | 14 |
| 28 | Multiscale computation delivers organophosphorus reactivity and stereoselectivity to immunoglobulin scavengers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 22841-22848. | 3.3 | 13 |
| 29 | Protective Allele for Multiple Sclerosis HLA-DRB1*01:01 Provides Kinetic Discrimination of Myelin and Exogenous Antigenic Peptides. <i>Frontiers in Immunology</i> , 2020, 10, 3088. | 2.2 | 13 |
| 30 | Chemical Polysialylation of Recombinant Human Proteins. <i>Methods in Molecular Biology</i> , 2015, 1321, 389-404. | 0.4 | 11 |
| 31 | QM/MM Description of Newly Selected Catalytic Bioscavengers Against Organophosphorus Compounds Revealed Reactivation Stimulus Mediated by Histidine Residue in the Acyl-Binding Loop. <i>Frontiers in Pharmacology</i> , 2018, 9, 834. | 1.6 | 10 |
| 32 | Glatiramer Acetate and Nanny Proteins Restrict Access of the Multiple Sclerosis Autoantigen Myelin Basic Protein to the 26S Proteasome. <i>BioMed Research International</i> , 2014, 2014, 1-10. | 0.9 | 9 |
| 33 | Expression of catalytic antibodies in eukaryotic systems. <i>Molecular Biology</i> , 2011, 45, 74-81. | 0.4 | 8 |
| 34 | Antibody-antigen pair probed by combinatorial approach and rational design: Bringing together structural insights, directed evolution, and novel functionality. <i>FEBS Letters</i> , 2012, 586, 2966-2973. | 1.3 | 8 |
| 35 | Creation of catalytic antibodies metabolizing organophosphate compounds. <i>Biochemistry (Moscow)</i> , 2012, 77, 1139-1146. | 0.7 | 8 |
| 36 | Epitope-Specific Response of Human Milk Immunoglobulins in COVID-19 Recovered Women. <i>Pathogens</i> , 2021, 10, 705. | 1.2 | 8 |

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|----|--|-----|-----------|
| 37 | Live Biosensors for Ultrahigh-Throughput Screening of Antimicrobial Activity against Gram-Negative Bacteria. <i>Antibiotics</i> , 2021, 10, 1161. | 1.5 | 7 |
| 38 | The Preferable Binding Pose of Canonical Butyrylcholinesterase Substrates Is Unproductive for Echothiophate. <i>Acta Naturae</i> , 2018, 10, 121-124. | 1.7 | 7 |
| 39 | Selective Eradication of <i>Staphylococcus aureus</i> by the Designer Genetically Programmed Yeast Biocontrol Agent. <i>Antibiotics</i> , 2020, 9, 527. | 1.5 | 6 |
| 40 | COVID-19 in Russia: Clinical and Immunological Features of the First-Wave Patients. <i>Acta Naturae</i> , 2021, 13, 102-115. | 1.7 | 6 |
| 41 | Deep Functional Profiling of Wild Animal Microbiomes Reveals Probiotic <i>Bacillus pumilus</i> Strains with a Common Biosynthetic Fingerprint. <i>International Journal of Molecular Sciences</i> , 2022, 23, 1168. | 1.8 | 5 |
| 42 | Pre-Steady-State Kinetics of the SARS-CoV-2 Main Protease as a Powerful Tool for Antiviral Drug Discovery. <i>Frontiers in Pharmacology</i> , 2021, 12, 773198. | 1.6 | 5 |
| 43 | Application of Tetrameric Recombinant Human Butyrylcholinesterase as a Biopharmaceutical for Amelioration of Symptoms of Acute Organophosphate Poisoning. <i>Bulletin of Experimental Biology and Medicine</i> , 2017, 163, 430-435. | 0.3 | 4 |
| 44 | Production of Recombinant Human Transferrin in Eukaryotic <i>Pichia pastoris</i> Expression System. <i>Bulletin of Experimental Biology and Medicine</i> , 2019, 167, 335-338. | 0.3 | 4 |
| 45 | Liquid drop of DNA libraries reveals total genome information. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 27300-27306. | 3.3 | 4 |
| 46 | Involvement of the N Domain Residues E34, K35, and R38 in the Functionally Active Structure of <i>Escherichia coli</i> Lon Protease. <i>Acta Naturae</i> , 2020, 12, 86-97. | 1.7 | 4 |
| 47 | Antibodies-antidotes against organophosphorus compounds. <i>Doklady Biochemistry and Biophysics</i> , 2009, 425, 94-97. | 0.3 | 2 |
| 48 | Expression of DNA-Encoded Antidote to Organophosphorus Toxins in the Methylophilic Yeast <i>Pichia Pastoris</i> . <i>Applied Biochemistry and Microbiology</i> , 2016, 52, 162-169. | 0.3 | 2 |
| 49 | New Genetic Constructs for Generation of Stable Therapeutic Antibodies to Organophosphorus Toxins in Methylophilic Yeasts <i>Pichia Pastoris</i> . <i>Bulletin of Experimental Biology and Medicine</i> , 2016, 161, 83-87. | 0.3 | 2 |
| 50 | Evolution of inhibitor-resistant natural mutant forms of HIV-1 protease probed by pre-steady state kinetic analysis. <i>Biochimie</i> , 2017, 142, 125-134. | 1.3 | 2 |
| 51 | A Study of the Protective Properties of an Antibody-Based Antidote Metabolizing Organophosphorus Pesticide Paraoxon. <i>Bulletin of Experimental Biology and Medicine</i> , 2017, 163, 218-221. | 0.3 | 2 |
| 52 | Cloning and characterization of serpin from red king crab <i>Paralithodes camtschaticus</i> . <i>Fish and Shellfish Immunology</i> , 2018, 81, 99-107. | 1.6 | 2 |
| 53 | Schools are segregated by educational outcomes in the digital space. <i>PLoS ONE</i> , 2019, 14, e0217142. | 1.1 | 2 |
| 54 | Mouse Model for Assessing the Subchronic Toxicity of Organophosphate Pesticides. <i>Acta Naturae</i> , 2018, 10, 125-128. | 1.7 | 2 |

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|----|---|-----|-----------|
| 55 | Pre-steady-state kinetics of interaction of wild-type and multiple drug-resistant HIV protease with first and second generation inhibitory drugs. <i>Doklady Biochemistry and Biophysics</i> , 2011, 440, 239-243. | 0.3 | 1 |
| 56 | Evolution of catalytic centers of antibodies by virtual screening of broad repertoire of mutants using supercomputer. <i>Doklady Biochemistry and Biophysics</i> , 2017, 475, 245-249. | 0.3 | 1 |
| 57 | Engineering Artificial Biodiversity of Lantibiotics to Expand Chemical Space of DNA-Encoded Antibiotics. <i>Biochemistry (Moscow)</i> , 2020, 85, 1319-1334. | 0.7 | 1 |
| 58 | Peculiarities of the Presentation of the Encephalitogenic MBP Peptide by HLA-DR Complexes Providing Protection and Predisposition to Multiple Sclerosis. <i>Acta Naturae</i> , 2021, 13, 127-133. | 1.7 | 1 |
| 59 | Recombinant Fragment of the Extracellular Domain of Human Desmoglein 3 Fused with the Fc-Fragment of Human IgG1 Selectively Adsorbs Autoreactive Antibodies from the Sera of Pemphigus Patients. <i>Doklady Biochemistry and Biophysics</i> , 2021, 498, 180-183. | 0.3 | 1 |
| 60 | Analysis of the Specificity of Auto-Reactive Antibodies to Individual Fragments of the Extracellular Domain of Desmoglein 3 in Patients with Pemphigus Vulgaris. <i>Bulletin of Experimental Biology and Medicine</i> , 2021, 171, 475-479. | 0.3 | 1 |
| 61 | Highly Similar Sequences of Mature IgA1 Proteases from <i>Neisseria meningitidis</i> , <i>Neisseria gonorrhoeae</i> and <i>Haemophilus influenzae</i> . <i>Pathogens</i> , 2022, 11, 734. | 1.2 | 1 |
| 62 | The antiidiotypic approach to obtaining a proteolytic antibody. <i>Doklady Biochemistry and Biophysics</i> , 2008, 420, 105-107. | 0.3 | 0 |
| 63 | Design of Chemical Conjugate for Targeted Therapy of Multiple Sclerosis Based of Constant Fragment of Human Antibody Heavy Chain and Peptoid Analog of Autoantigen MOC35-55. <i>Bulletin of Experimental Biology and Medicine</i> , 2017, 162, 777-780. | 0.3 | 0 |
| 64 | Genetic Engineering of Native Chain Combinations of B-Cell Repertoires on the Surface of Methylophilic Yeasts <i>Pichia pastoris</i> . <i>Bulletin of Experimental Biology and Medicine</i> , 2017, 163, 263-267. | 0.3 | 0 |
| 65 | Preparation of Recombinant Serpin from Red King Crab <i>Paralithodes Ćamtschaticus</i> for Biomedical Research Purposes. <i>Bulletin of Experimental Biology and Medicine</i> , 2017, 163, 210-213. | 0.3 | 0 |
| 66 | Peculiarities of the Mechanism of Interactions of Catalytic Antibodies with Organophosphorus Substrates. <i>Molecular Biology</i> , 2017, 51, 830-839. | 0.4 | 0 |
| 67 | Generation of Highly Specific Proteolytic Biocatalysts by Screening Technologies. <i>Bulletin of Experimental Biology and Medicine</i> , 2018, 165, 399-402. | 0.3 | 0 |
| 68 | Cascade Heap: Towards Time-Optimal Extractions. <i>Theory of Computing Systems</i> , 2019, 63, 637-646. | 0.7 | 0 |
| 69 | Development of a Serum-Free Media Based on the Optimal Combination of Recombinant Protein Additives and Hydrolysates of Non-animal Origin to Produce Immunoglobulins. <i>Applied Biochemistry and Microbiology</i> , 2020, 56, 595-603. | 0.3 | 0 |