

Robert Root-Bernstein

List of Publications by Year in descending order

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87
papers

1,728
citations

279798

23
h-index

330143

37
g-index

98
all docs

98
docs citations

98
times ranked

1288
citing authors

#	ARTICLE	IF	CITATIONS
1	Arts Foster Scientific Success: Avocations of Nobel, National Academy, Royal Society, and Sigma Xi Members. <i>Journal of Psychology of Science and Technology</i> , 2008, 1, 51-63.	0.6	103
2	The ribosome as a missing link in the evolution of life. <i>Journal of Theoretical Biology</i> , 2015, 367, 130-158.	1.7	100
3	Compositional complementarity and prebiotic ecology in the origin of life. <i>BioEssays</i> , 2006, 28, 399-412.	2.5	93
4	Complexities in the Relationship Between Infection and Autoimmunity. <i>Current Allergy and Asthma Reports</i> , 2014, 14, 407.	5.3	80
5	Innate Receptor Activation Patterns Involving TLR and NLR Synergisms in COVID-19, ALI/ARDS and Sepsis Cytokine Storms: A Review and Model Making Novel Predictions and Therapeutic Suggestions. <i>International Journal of Molecular Sciences</i> , 2021, 22, 2108.	4.1	70
6	Artistic Scientists and Scientific Artists: The Link Between Polymathy and Creativity.. , 0, , 127-151.		64
7	Arts and crafts as adjuncts to STEM education to foster creativity in gifted and talented students. <i>Asia Pacific Education Review</i> , 2015, 16, 203-212.	2.5	60
8	Unresolved issues in theories of autoimmune disease using myocarditis as a framework. <i>Journal of Theoretical Biology</i> , 2015, 375, 101-123.	1.7	60
9	Imaginary Worldplay in Childhood and Maturity and Its Impact on Adult Creativity. <i>Creativity Research Journal</i> , 2006, 18, 405-425.	2.6	55
10	The ribosome as a missing link in prebiotic evolution II: Ribosomes encode ribosomal proteins that bind to common regions of their own mRNAs and rRNAs. <i>Journal of Theoretical Biology</i> , 2016, 397, 115-127.	1.7	42
11	Antigenic complementarity between coxsackie virus and streptococcus in the induction of rheumatic heart disease and autoimmune myocarditis. <i>Autoimmunity</i> , 2009, 42, 1-16.	2.6	41
12	Simultaneous origin of homochirality, the genetic code and its directionality. <i>BioEssays</i> , 2007, 29, 689-698.	2.5	38
13	Antigenic complementarity in the induction of autoimmunity: A general theory and review. <i>Autoimmunity Reviews</i> , 2007, 6, 272-277.	5.8	38
14	CAUSE AND PREVENTION OF POSTINFECTIOUS AND POSTVACCINAL NEUROPATHIES IN LIGHT OF A NEW THEORY OF AUTOIMMUNITY. <i>Lancet, The</i> , 1986, 328, 251-252.	13.7	37
15	Are Diabetic Neuropathy, Retinopathy and Nephropathy Caused by Hyperglycemic Exclusion of Dehydroascorbate Uptake by Glucose Transporters?. <i>Journal of Theoretical Biology</i> , 2002, 216, 345-359.	1.7	34
16	Rethinking Molecular Mimicry in Rheumatic Heart Disease and Autoimmune Myocarditis: Laminin, Collagen IV, CAR, and B1AR as Initial Targets of Disease. <i>Frontiers in Pediatrics</i> , 2014, 2, 85.	1.9	33
17	tRNA evolution from the proto-tRNA minihelix world. <i>Transcription</i> , 2016, 7, 153-163.	3.1	33
18	Arts and Crafts. <i>Economic Development Quarterly</i> , 2013, 27, 221-229.	0.9	32

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19	tRNA structure and evolution and standardization to the three nucleotide genetic code. <i>Transcription</i> , 2017, 8, 205-219.	3.1	32
20	Age and Location in Severity of COVID-19 Pathology: Do Lactoferrin and Pneumococcal Vaccination Explain Low Infant Mortality and Regional Differences?. <i>BioEssays</i> , 2020, 42, 2000076.	2.5	32
21	A Modular Hierarchy-Based Theory of the Chemical Origins of Life Based on Molecular Complementarity. <i>Accounts of Chemical Research</i> , 2012, 45, 2169-2177.	15.6	31
22	Estradiol Binds to Insulin and Insulin Receptor Decreasing Insulin Binding in vitro. <i>Frontiers in Endocrinology</i> , 2014, 5, 118.	3.5	28
23	Possible Cross-Reactivity between SARS-CoV-2 Proteins, CRM197 and Proteins in Pneumococcal Vaccines May Protect Against Symptomatic SARS-CoV-2 Disease and Death. <i>Vaccines</i> , 2020, 8, 559.	4.4	26
24	Molecular Complementarity III. Peptide Complementarity as a Basis for Peptide Receptor Evolution: A Bioinformatic Case Study of Insulin, Glucagon and Gastrin. <i>Journal of Theoretical Biology</i> , 2002, 218, 71-84.	1.7	25
25	Receptor-Mediated Enhancement of Beta Adrenergic Drug Activity by Ascorbate In Vitro and In Vivo. <i>PLoS ONE</i> , 2010, 5, e15130.	2.5	25
26	Correlation between tools for thinking; arts, crafts, and design avocations; and scientific achievement among STEMM professionals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 1910-1917.	7.1	22
27	Antigenic Complementarity in the Origins of Autoimmunity: A General Theory Illustrated With a Case Study of Idiopathic Thrombocytopenia Purpura. <i>Clinical and Developmental Immunology</i> , 2006, 13, 49-65.	3.3	21
28	The Ribosome as a Missing Link in Prebiotic Evolution III: Over-Representation of tRNA- and rRNA-Like Sequences and Plieofunctionality of Ribosome-Related Molecules Argues for the Evolution of Primitive Genomes from Ribosomal RNA Modules. <i>International Journal of Molecular Sciences</i> , 2019, 20, 140.	4.1	21
29	Question 7: The First Units of Life Were Not Simple Cells. <i>Origins of Life and Evolution of Biospheres</i> , 2007, 37, 429-432.	1.9	20
30	Autoimmunity and the microbiome: T-cell receptor mimicry of self and microbial antigens mediates self tolerance in holobionts. <i>BioEssays</i> , 2016, 38, 1068-1083.	2.5	19
31	Glucose binds to the insulin receptor affecting the mutual affinity of insulin and its receptor. <i>Cellular and Molecular Life Sciences</i> , 2009, 66, 2721-2732.	5.4	18
32	Molecular complementarity between simple, universal molecules and ions limited phenotype space in the precursors of cells. <i>Biology Direct</i> , 2015, 10, 28.	4.6	18
33	Fostering venture research: A case study of the discovery that ascorbate enhances adrenergic drug activity. <i>Drug Development Research</i> , 2002, 57, 58-74.	2.9	17
34	Martha Graham, Dance, and the Polymathic Imagination: A Case for Multiple Intelligences or Universal Thinking Tools?. <i>Journal of Dance Education</i> , 2003, 3, 16-27.	0.2	17
35	Human Immunodeficiency Virus Proteins Mimic Human T Cell Receptors Inducing Cross-Reactive Antibodies. <i>International Journal of Molecular Sciences</i> , 2017, 18, 2091.	4.1	17
36	COVID-19 coagulopathies: Human blood proteins mimic SARS-CoV-2 virus, vaccine proteins and bacterial co-infections inducing autoimmunity. <i>BioEssays</i> , 2021, 43, e2100158.	2.5	17

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37	Antigenic Complementarity Resulting in Idiotype-antidiotype Immune Complexes: Possible Contributor to AIDS Pathogenesis and Autoimmunity. <i>Autoimmunity</i> , 2004, 37, 203-210.	2.6	16
38	Synergistic Activation of Toll-Like and NOD Receptors by Complementary Antigens as Facilitators of Autoimmune Disease: Review, Model and Novel Predictions. <i>International Journal of Molecular Sciences</i> , 2020, 21, 4645.	4.1	16
39	Antigenic complementarity between HIV and other AIDS-associated infections results in idiotype-antidiotype antibody complexes that cross react with lymphocyte proteins. <i>Vaccine</i> , 2005, 23, 2160-2163.	3.8	15
40	Adrenergic Agonists Bind to Adrenergic-Receptor-Like Regions of the Mu Opioid Receptor, Enhancing Morphine and Methionine-Enkephalin Binding: A New Approach to Biased Opioids?. <i>International Journal of Molecular Sciences</i> , 2018, 19, 272.	4.1	15
41	Pneumococcal and Influenza Vaccination Rates and Pneumococcal Invasive Disease Rates Set Geographical and Ethnic Population Susceptibility to Serious COVID-19 Cases and Deaths. <i>Vaccines</i> , 2021, 9, 474.	4.4	14
42	Small Molecule Complementarity As A Source of Novel Pharmaceutical Agents and Combination Therapies. <i>Current Pharmaceutical Design</i> , 2008, 14, 55-62.	1.9	13
43	Autoreactive T cell receptor (V _D J _D) sequences in diabetes are homologous to insulin, glucagon, the insulin receptor, and the glucagon receptor. <i>Journal of Molecular Recognition</i> , 2009, 22, 177-187.	2.1	13
44	How to Make a Non-Antigenic Protein (Auto) Antigenic: Molecular Complementarity Alters Antigen Processing and Activates Adaptive-Innate Immunity Synergy. <i>Anti-Cancer Agents in Medicinal Chemistry</i> , 2015, 15, 1242-1259.	1.7	13
45	The Eukaryotic Cell Originated in the Integration and Redistribution of Hyperstructures from Communities of Prokaryotic Cells Based on Molecular Complementarity. <i>International Journal of Molecular Sciences</i> , 2009, 10, 2611-2632.	4.1	11
46	A Common Molecular Motif Characterizes Extracellular Allosteric Enhancers of GPCR Aminergic Receptors and Suggests Enhancer Mechanism of Action. <i>Current Medicinal Chemistry</i> , 2014, 21, 3673-3686.	2.4	11
47	Enzymatic recycling of ascorbic acid from dehydroascorbic acid by glutathione-like peptides in the extracellular loops of aminergic G protein coupled receptors. <i>Journal of Molecular Recognition</i> , 2016, 29, 296-302.	2.1	11
48	Tools for thinking applied to nature: an inclusive pedagogical framework for environmental education. <i>Oryx</i> , 2014, 48, 584-592.	1.0	9
49	Mutual Enhancement of Opioid and Adrenergic Receptors by Combinations of Opioids and Adrenergic Ligands Is Reflected in Molecular Complementarity of Ligands: Drug Development Possibilities. <i>International Journal of Molecular Sciences</i> , 2019, 20, 4137.	4.1	9
50	A tethered ascorbate-norepinephrine compound, 4-UT, displays long-acting adrenergic activity on rabbit aortic smooth muscle. <i>Drug Development Research</i> , 2008, 69, 242-250.	2.9	8
51	Experimental Test of L- and D-Amino Acid Binding to L- and D-Codons Suggests that Homochirality and Codon Directionality Emerged with the Genetic Code. <i>Symmetry</i> , 2010, 2, 1180-1200.	2.2	8
52	Rapid Non-Enzymatic Glycation of the Insulin Receptor under Hyperglycemic Conditions Inhibits Insulin Binding In Vitro: Implications for Insulin Resistance. <i>International Journal of Molecular Sciences</i> , 2017, 18, 2602.	4.1	8
53	Glutathione and Glutathione-Like Sequences of Opioid and Aminergic Receptors Bind Ascorbic Acid, Adrenergic and Opioid Drugs Mediating Antioxidant Function: Relevance for Anesthesia and Abuse. <i>International Journal of Molecular Sciences</i> , 2020, 21, 6230.	4.1	8
54	A Statistical Study of Intra-Domain and Trans-Domain Polymathy among Nobel Laureates. <i>Creativity Research Journal</i> , 2020, 32, 93-112.	2.6	8

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55	T Cell Receptor Variable Regions in Diabetes Bind to Each Other, to Insulin, Glucagon or Insulin Receptor, and to Their Antibodies. <i>The Open Autoimmunity Journal</i> , 2012, 4, 10-22.	0.4	8
56	Biased, Bitopic, Opioid-Adrenergic Tethered Compounds May Improve Specificity, Lower Dosage and Enhance Agonist or Antagonist Function with Reduced Risk of Tolerance and Addiction. <i>Pharmaceuticals</i> , 2022, 15, 214.	3.8	8
57	Towards an integration of mathematical models, theories and observations concerning autoimmune diseases. <i>Journal of Theoretical Biology</i> , 2015, 375, 1-3.	1.7	7
58	An Insulin-Like Modular Basis for the Evolution of Glucose Transporters (GLUT) with Implications for Diabetes. <i>Evolutionary Bioinformatics</i> , 2007, 3, 117693430700300.	1.2	5
59	Differences in Male and Female Arts and Crafts Avocations in the Early Training and Patenting Activity Of Stemm Professionals. <i>Technology and Innovation</i> , 2019, 20, 197-219.	0.2	5
60	An insulin-like modular basis for the evolution of glucose transporters (GLUT) with implications for diabetes. <i>Evolutionary Bioinformatics</i> , 2007, 3, 317-31.	1.2	5
61	A Review of ACD-STEMM Integration: Part 1: A Taxonomy of Integrated Bridges. <i>Leonardo</i> , 2019, 52, 492-493.	0.3	4
62	Tartaric Acid Enhances Adrenergic Receptor Activity: Test of a General Theory of Extracellular Aminergic GPCR Enhancer Discovery. <i>Current Drug Discovery Technologies</i> , 2015, 11, 293-307.	1.2	4
63	Peptide vaccines against arthritis. <i>Future Rheumatology</i> , 2006, 1, 339-344.	0.2	4
64	Co-Evolution of Opioid and Adrenergic Ligands and Receptors: Shared, Complementary Modules Explain Evolution of Functional Interactions and Suggest Novel Engineering Possibilities. <i>Life</i> , 2021, 11, 1217.	2.4	4
65	Certain of Heisenberg's Arts. <i>Leonardo</i> , 2007, 40, 483-483.	0.3	3
66	Niko Tinbergen's Visual Arts. <i>Leonardo</i> , 2007, 40, 67-69.	0.3	3
67	A Review of ACD-STEMM Integration, Part 2: Controlled Studies of Transdisciplinary Tools-for-Thinking Bridges for Arts-Science Pedagogy. <i>Leonardo</i> , 2019, 52, 494-495.	0.3	3
68	Polymathy. , 2020, , 375-381.		3
69	Polymathy Among Nobel Laureates As a Creative Strategy- The Qualitative and Phenomenological Evidence. <i>Creativity Research Journal</i> , 2023, 35, 116-142.	2.6	3
70	Roger Sperry: Ambicerebral Man. <i>Leonardo</i> , 2005, 38, 224-225.	0.3	2
71	Ronald Ross: Renaissance Man. <i>Leonardo</i> , 2010, 43, 165-166.	0.3	2
72	A Review of ACD-STEMM Integration, Part 3: Controlled Studies of Additional Transdisciplinary Bridges for Arts-Science Pedagogy and General Conclusions. <i>Leonardo</i> , 2019, 52, 496-497.	0.3	2

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73	Positive Vaccination Markers. Hum Vaccin, 2007, 3, 104-105.	2.4	1
74	Dorothy Crowfoot Hodgkin: Structure as Art. Leonardo, 2007, 40, 259-261.	0.3	1
75	Teaching, Not Testing, for Scientific Vision. Science, 2009, 326, 365-366.	12.6	1
76	Defining Life: Products or Processes?. Journal of Biomolecular Structure and Dynamics, 2012, 29, 631-632.	3.5	1
77	From Compositional Chemical Ecologies to Self-replicating Ribosomes and on to Functional Trait Ecological Networks. , 2016, , 327-343.		1
78	Adrenergic agonists and antagonists enhance opioid receptor activity. , 2022, , 79-89.		1
79	Science Museums and the Arts of Imaginative Thinking. Journal of Museum Education, 2005, 30, 3-8.	0.6	0
80	A measles-derived peptide treats and vaccinates against adjuvant arthritis. Autoimmunity Reviews, 2006, , .	5.8	0
81	Howard Florey: Photographer, Cinematographer and Sunday Painter. Leonardo, 2009, 42, 265-265.	0.3	0
82	A measles-derived peptide treats and vaccinates against adjuvant arthritis. Autoimmunity Reviews, 2009, 8, 405-409.	5.8	0
83	Robert R. Wilson: Shaping Matter. Leonardo, 2009, 42, 163-164.	0.3	0
84	Mental Tools for Thinking About DNA Technologies in New Ways. Archives of Pathology and Laboratory Medicine, 2002, 126, 263-265.	2.5	0
85	Predicting Protein Glycation Rate and State: The Need for Models to Incorporate Additional Features. FASEB Journal, 2019, 33, .	0.5	0
86	Leonardo STEAM Initiative on Education. Leonardo, 2020, 53, 331-331.	0.3	0
87	Relationships Between Talent, Training, Polymathy, and Creativity. , 2021, , 357-370.		0