Jean-jacques Toulme

List of Publications by Year
in descending order

118 papers	4,534 citations	94433 37 h-index	114465 63 g-index
125 all docs	125 docs citations	125 times ranked	2836 citing authors

#	Article	IF	Citations
1	Specific regulation of gene expression by antisense, sense and antigene nucleic acids. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 1990, 1049, 99-125.	2.4	709
2	Enzymatic amplification of translation inhibition of rabbit Î²-globin mRNA mediated by anti-messenger oligodeoxynucleotides covalently linked to intercalating agents. Nucleic Acids Research, 1987, 15, 4717-4736.	14.5	171
3	Inhibition of translation initiation by antisense oligonucleotides via an RNase-H independent mechanism. Nucleic Acids Research, 1991, 19, 1113-1119.	14.5	136
4	A tryptophan-containing peptide recognizes and cleaves DNA at apurinic sites. Nature, 1981, 292, 858-859.	27.8	119
5	In vitro selection identifies key determinants for loopâ€"loop interactions: RNA aptamers selective for the TAR RNA element of HIV-1. Rna, 1999, 5, 1605-1614.	3.5	114
6	DNA Aptamers Selected Against the HIV-1trans-Activation-responsive RNA Element Form RNA-DNA Kissing Complexes. Journal of Biological Chemistry, 1999, 274, 12730-12737.	3.4	103
7	DNA Aptamers Selected against the HIV-1 RNase H Display in Vitro Antiviral Activityâ€. Biochemistry, 2001, 40, 10087-10094.	2.5	99
8	The common 5â€² terminal sequence on trypanosome mRNAs: a target for anti-messenger oligodeoxynucleotides. Nucleic Acids Research, 1986, 14, 5605-5614.	14.5	94
9	LNA/DNA chimeric oligomers mimic RNA aptamers targeted to the TAR RNA element of HIV-1. Nucleic Acids Research, 2004, 32, 3101-3107.	14.5	85
10	Is a Closing â€œGA Pairâ€• a Rule for Stable Loop-Loop RNA Complexes?. Journal of Biological Chemistry, 2000, 275, 21287-21294.	3.4	83
11	Aptamers: a new class of oligonucleotides in the drug discovery pipeline?. Current Opinion in Pharmacology, 2009, 9, 602-607.	3.5	72
12	Apical Loopâˆ'Internal Loop Interactions:Â A New RNAâˆ'RNA Recognition Motif Identified through in Vitro Selection against RNA Hairpins of the Hepatitis C Virus mRNAâ€. Biochemistry, 2002, 41, 5883-5893.	2.5	71
13	Modified (PNA, 2'-O-methyl and phosphoramidate) anti-TAR antisense oligonucleotides as strong and specific inhibitors of in vitro HIV-1 reverse transcription. Nucleic Acids Research, 1998, 26, 5492-5500.	14.5	69
14	Selective inhibitory DNA aptamers of the human RNase H1. Nucleic Acids Research, 2003, 31, 5776-5788.	14.5	69
15	Comparative Analysis of Translation Efficiencies of Hepatitis C Virus 5â€² Untranslated Regions among Intraindividual Quasispecies Present in Chronic Infection: Opposite Behaviors Depending on Cell Type. Journal of Virology, 2000, 74, 10827-10833.	3.4	68
16	Benzoquinazoline Derivatives as Substitutes for Thymine in Nucleic Acid Complexes. Use of Fluorescence Emission of Benzo[g]quinazoline-2,4-(1H,3H)-dione in Probing Duplex and Triplex Formation. Biochemistry, 1998, 37, 13765-13775.	2.5	64
17	RNase H-mediated inhibition of translation by antisense oligodeoxyribo-nucleotides: use of backbone modification to improve specificity. Gene, 1992, 121, 189-194.	2.2	62
18	Aptamers Targeted to an RNA Hairpin Show Improved Specificity Compared to that of Complementary Oligonucleotidesâ€. Biochemistry, 2006, 45, 12076-12082.	2.5	59

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19	Anti-messenger oligodeoxynucleotides: specific inhibition of rabbit Î²-globin synthesis in wheat germ extracts and Xenopus oocytes. Biochimie, 1986, 68, 1063-1069.	2.6	55
20	Loop-loop interaction of HIV-1 TAR RNA with N3' -> P5' deoxyphosphoramidate aptamers inhibits in vitro Tat-mediated transcription. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 9709-9714.	7.1	54
21	Use of Dynamic Combinatorial Chemistry for the Identification of Covalently Appended Residues that Stabilize Oligonucleotide Complexes. Angewandte Chemie - International Edition, 2004, 43, 3144-3147.	13.8	52
22	Antisense oligonucleotides targeted to the domain IIId of the hepatitis C virus IRES compete with 40S ribosomal subunit binding and prevent in vitro translation. Nucleic Acids Research, 2003, 31, 734-742.	14.5	51
23	2â€˜-O-Methyl-RNA Hairpins Generate Loopâˆ’Loop Complexes and Selectively Inhibit HIV-1 Tat-Mediated Transcription. Biochemistry, 2002, 41, 12186-12192.	2.5	50
24	SELEX and dynamic combinatorial chemistry interplay for the selection of conjugated RNA aptamers. Organic and Biomolecular Chemistry, 2006, 4, 4082.	2.8	50
25	Molecular dynamics reveals the stabilizing role of loop closing residues in kissing interactions: comparison between TAR-TAR* and TAR-aptamer. Nucleic Acids Research, 2003, 31, 4275-4284.	14.5	49
26	Towards the selection of phosphorothioate aptamers. FEBS Journal, 2000, 267, 5032-5040.	0.2	48
27	Purification and characterization of human ribonuclease HII. Nucleic Acids Research, 1994, 22, 5247-5254.	14.5	45
28	RNase H is responsible for the non-specific inhibition ofin vitrotranslation by 2â€²-O-alkyl chimeric oligonucleotides: high affinity or selectivity, a dilemma to design antisense oligomers. Nucleic Acids Research, 1995, 23, 3434-3440.	14.5	44
29	Endogenous Expression of an Anti-TAR Aptamer Reduces HIV-1 Replication. RNA Biology, 2006, 3, 150-156.	3.1	44
30	Liquid-crystal NMR structure of HIV TAR RNA bound to its SELEX RNA aptamer reveals the origins of the high stability of the complex. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 9210-9215.	7.1	44
31	Riboswitches Based on Kissing Complexes for the Detection of Small Ligands. Angewandte Chemie - International Edition, 2014, 53, 6942-6945.	13.8	43
32	Ex Vivo and In Vivo Imaging and Biodistribution of Aptamers Targeting the Human Matrix MetalloProtease-9 in Melanomas. PLoS ONE, 2016, 11, e0149387.	2.5	43
33	A DNA hairpin as a target for antisense oligonucleotides. Journal of the American Chemical Society, 1993, 115, 796-797.	13.7	40
34	^{99m}Tc-MAG3-Aptamer for Imaging Human Tumors Associated with High Level of Matrix Metalloprotease-9. Bioconjugate Chemistry, 2012, 23, 2192-2200.	3.6	39
35	Deciphering Aromatic Oligoamide Foldamerâ€“DNA Interactions. Angewandte Chemie - International Edition, 2012, 51, 473-477.	13.8	39
36	Mapping of a Minimal AU-rich Sequence Required for Lipopolysaccharide-induced Binding of a 55-kDa Protein on Tumor Necrosis Factor-Î± mRNA. Journal of Biological Chemistry, 1998, 273, 13781-13786.	3.4	38

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37	Determinants of apical loopâ€“internal loop RNAâ€“RNA interactions involving the HCV IRES. Biochemical and Biophysical Research Communications, 2004, 322, 820-826.	2.1	38
38	Hexitol Nucleic Acid-Containing Aptamers Are Efficient Ligands of HIV-1 TAR RNAâ€. Biochemistry, 2005, 44, 2926-2933.	2.5	38
39	Systematic screening of LNA/2â€²-O-methyl chimeric derivatives of a TAR RNA aptamer. FEBS Letters, 2007, 581, 771-774.	2.8	37
40	New candidates for true antisense. Nature Biotechnology, 2001, 19, 17-18.	17.5	36
41	LNA derivatives of a kissing aptamer targeted to the trans-activating responsive RNA element of HIV-1. Blood Cells, Molecules, and Diseases, 2007, 38, 204-209.	1.4	36
42	Nucleic acids targeted to drugs: SELEX against a quadruplex ligand. Biochimie, 2011, 93, 1357-1367.	2.6	36
43	Fluorescence study of the association between gene 32 protein of bacteriophage T4 and . Evidence for energy transfer. Nucleic Acids and Protein Synthesis, 1980, 606, 95-104.	1.7	34
44	Aptamer selection by direct microfluidic recovery and surface plasmon resonance evaluation. Biosensors and Bioelectronics, 2016, 80, 418-425.	10.1	33
45	In Vitro Selection of RNA Aptamers Derived from a Genomic Human Library against the TAR RNA Element of HIV-1. Biochemistry, 2009, 48, 6278-6284.	2.5	30
46	Encapsidation of RNAâ€“Polyelectrolyte Complexes with Amphiphilic Block Copolymers: Toward a New Self-Assembly Route. Journal of the American Chemical Society, 2012, 134, 20189-20196.	13.7	29
47	A combinatorial approach to the repertoire of RNA kissing motifs; towards multiplex detection by switching hairpin aptamers. Nucleic Acids Research, 2016, 44, 4450-4459.	14.5	29
48	Absorption and fluorescence studies of the binding of the recA gene product from E. coli to single-stranded and double-stranded DNA. Ionic strength dependence. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 1984, 781, 7-13.	2.4	28
49	Effect of RNA secondary structure and modified bases on the inhibition of trypanosomatid protein synthesis in cellfree extracts by antisense oligodeoxynucleotides. Nucleic Acids Research, 1990, 18, 4711-4717.	14.5	28
50	Effect of the terminal phosphate derivatization of Î²- and Î±-oligodeoxynucleotides on their antisense activity in protein biosynthesis, stability and uptake by eucaryotic cells. Biochimie, 1992, 74, 485-489.	2.6	28
51	Antisense 2â€²-O-alkyl oligoribonucleotides are efficient inhibitors of reverse transcription. Nucleic Acids Research, 1995, 23, 64-71.	14.5	27
52	Antisense Oligonucleotides Containing Modified Bases Inhibit in Vitro Translation of Leishmania amazonensis mRNAs by Invading the Mini-exon Hairpin. Journal of Biological Chemistry, 1999, 274, 8191-8198.	3.4	27
53	Regulating eukaryotic gene expression with aptamers. FEBS Letters, 2004, 567, 55-62.	2.8	27
54	NMR structure of a kissing complex formed between the TAR RNA element of HIV-1 and a LNA-modified aptamer. Nucleic Acids Research, 2007, 35, 6103-6114.	14.5	27

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55	Use of the Fluorescent Nucleoside Analogue Benzo[g]quinazoline 2â€²-O-Methyl--D-ribofuranoside to Monitor the Binding of the HIV-1 Tat Protein or of Antisense Oligonucleotides to the TAR RNA Stem-Loop. Helvetica Chimica Acta, 2000, 83, 1424-1436.	1.6	26
56	Modulating viral gene expression by aptamers to RNA structures. Biology of the Cell, 2003, 95, 229-238.	2.0	26
57	Surface Plasmon Resonance Investigation of RNA Aptamerâ€"RNA Ligand Interactions. Methods in Molecular Biology, 2011, 764, 279-300.	0.9	25
58	ELAKCA: Enzyme-Linked Aptamer Kissing Complex Assay as a Small Molecule Sensing Platform. Analytical Chemistry, 2016, 88, 2570-2575.	6.5	25
59	Bimodal Loopâˆ'Loop Interactions Increase the Affinity of RNA Aptamers for HIV-1 RNA Structuresâ€. Biochemistry, 2006, 45, 1518-1524.	2.5	23
60	HAPIscreen, a method for high-throughput aptamer identification. Journal of Nanobiotechnology, 2011, 9, 25.	9.1	23
61	Control of Gene Expression by Oligodeoxynucleotides Covalently Linked to Intercalating Agents and Nucleic Acid-cleaving Reagents. , 1989, , 137-172.		23
62	Improved leishmanicidal effect of phosphorotioate antisense oligonucleotides by LDL-mediated delivery. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 1995, 1264, 229-237.	2.4	22
63	In Vitro Selection of DNA Aptamers Against the HIV-1 TAR RNA Hairpin. Oligonucleotides, 2002, 12, 265-274.	4.3	22
64	Single-molecule observations of RNAâ€"RNA kissing interactions in a DNA nanostructure. Biomaterials Science, 2016, 4, 130-135.	5.4	22
65	Stacking interactions between aromatic amino acids and adenine ring of ATP in zinc mediated ternary complexes. Bioinorganic Chemistry, 1978, 8, 319-329.	1.1	21
66	A spectroscopic probe of stacking interactions between nucleic acid bases and tryptophan residues of proteins. Nucleic Acids Research, 1979, 7, 1945-1954.	14.5	21
67	Modified oligonucleotides in rabbit reticulocytes: uptake, stability and antisense properties. Biochimie, 1991, 73, 1403-1408.	2.6	20
68	Tricyclo-DNA Containing Oligonucleotides as Steric Block Inhibitors of Human Immunodeficiency Virus Type 1 Tat-Dependent Trans-Activation and HIV-1 Infectivity. Oligonucleotides, 2007, 17, 54-65.	2.7	20
69	Mechanisms for the recognition of chemically-modified DNA by peptides and proteins. Biochimie, 1982, 64, 697-705.	2.6	19
70	Chimeric alpha-beta oligonucleotides as antisense inhibitors of reverse transcription. FEBS Letters, 1995, 361, 41-45.	2.8	19
71	Eukaryotic ribonucleases HI and HII generate characteristic hydrolytic patterns on DNA-RNA hybrids: further evidence that mitochondrial RNase H is an RNase HII. Nucleic Acids Research, 2000, 28, 3674-3683.	14.5	19
72	A phosphorothioate oligonucleotide blocks reverse transcription via an antisense mechanism. FEBS Letters, 1994, 340, 236-240.	2.8	18

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73	Role of tryptophyl residues in the binding of gene 32 protein from phage T4 to single-stranded DNA. Photochemical modification of tryptophan by trichloroethanol. Biochemistry, 1984, 23, 1195-1201.	2.5	17
74	Binding of oligopyrimidines to the RNA hairpin responsible for the ribosomegag-polframeshift in HIV-1. FEBS Letters, 1999, 449, 169-174.	2.8	17
75	RNA AND N3â€² â†' P5â€² KISSING APTAMERS TARGETED TO THETRANS-ACTIVATION RESPONSIVE (TAR) RNA OF THE HUMAN IMMUNODEFICIENCY VIRUS-1. Nucleosides, Nucleotides and Nucleic Acids, 2001, 20, 441-449.	1.1	17
76	Aptamers Targeting RNA Molecules. Methods in Molecular Biology, 2009, 535, 79-105.	0.9	17
77	Effect of phosphate ions on the fluorescence of tryptophan derivatives. Biochimie, 1979, 61, 957-960.	2.6	16
78	Involvement of tryptophyl residues in the binding of model peptides and gene 32 protein from phage T4 to single-stranded polynucleotides. A spectroscopic method for detection of tryptophan in the vicinity of nucleic acid bases. Biochemistry, 1984, 23, 1202-1207.	2.5	15
79	Double Hairpin Complexes Allow Accommodation of All Four Base Pairs in Triple Helices Containing Both DNA and RNA Strands. Journal of Biological Chemistry, 1996, 271, 24187-24192.	3.4	14
80	Identification of Aptamers Against the DNA Template for In Vitro Transcription of the HIV-1 TAR Element. Oligonucleotides, 1997, 7, 369-380.	4.3	14
81	In Vitro Selection Procedures for Identifying DNA and RNA Aptamers Targeted to Nucleic Acids and Proteins. , 2005, 288, 391-410.		14
82	Recognition of natural and chemically-damaged nucleic acids by peptides and proteins. , 1982, , 229-285.		14
83	Role of tryptophan and cysteine in the binding of gene 32 protein from phage T4 to single-stranded DNA. Modification of crucial residues by oxidation with selective free-radical anions. Biochemistry, 1984, 23, 1208-1213.	2.5	13
84	An improved design of the kissing complex-based aptasensor for the detection of adenosine. Analytical and Bioanalytical Chemistry, 2015, 407, 6515-6524.	3.7	13
85	A Fluorescent Base Analog for Probing Triple Helix Formation. Oligonucleotides, 1998, 8, 469-476.	4.3	12
86	Aptamers as imaging agents. Expert Opinion on Medical Diagnostics, 2010, 4, 511-518.	1.6	12
87	A Method to Select Chemically Modified Aptamers Directly. Oligonucleotides, 2001, 11, 379-385.	4.3	11
88	Anti-pesticide DNA aptamers fail to recognize their targets with asserted micromolar dissociation constants. Analytica Chimica Acta, 2021, 1159, 338382.	5.4	11
89	Triggering nucleic acid nanostructure assembly by conditional kissing interactions. Nucleic Acids Research, 2018, 46, 1052-1058.	14.5	10
90	Relative contribution of photo-addition, helper oligonucleotide and RNase H to the antisense effect of psoralen-oligonucleotide conjugates, on in vitro translation of Leishmania mRNAs. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 1994, 1219, 98-106.	2.4	9

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91	Ribonuclease H-mediated inhibition of translation and reverse transcription by antisense oligodeoxynucleotides. Biochemical Society Transactions, 1992, 20, 764-767.	3.4	8
92	Oligonucleotide solid-phase synthesis on fluorescent nanoparticles grafted on controlled pore glass. RSC Advances, 2012, 2, 11858.	3.6	8
93	Recognition of damaged regions in DNA by oligopeptides and proteins. Biochimie, 1985, 67, 301-307.	2.6	7
94	Blockage of AM V reverse transcriptase by antisense oligodeoxynucleotides. FEBS Letters, 1990, 274, 53-56.	2.8	7
95	Anti-HIV Activity of Steric Block Oligonucleotides. Annals of the New York Academy of Sciences, 2006, 1082, 103-115.	3.8	7
96	Engineering Light-Up Aptamers for the Detection of RNA Hairpins through Kissing Interaction. Analytical Chemistry, 2020, 92, 9113-9117.	6.5	7
97	A malachite green light-up aptasensor for the detection of theophylline. Talanta, 2021, 232, 122417.	5.5	7
98	Single-strand binding proteins from phage T4 and E. coli form higher order structures with poly(dT). Biochimie, 1986, 68, 1129-1134.	2.6	5
99	Comparative Studies of Tricyclo-DNA- and LNA-Containing Oligonucleotides as Inhibitors of HIV-1 Gene Expression. Nucleosides, Nucleotides and Nucleic Acids, 2007, 26, 747-750.	1.1	5
100	Electrostatics Explains the Positionâ€Đependent Effect of Gâ‹…U Wobble Base Pairs on the Affinity of RNA Kissing Complexes. ChemPhysChem, 2017, 18, 2782-2790.	2.1	5
101	The binding of T4 gene 32 protein to MS2 virus RNA and transfer RNA. Nucleic Acids Research, 1980, 8, 1357-1372.	14.5	4
102	Antisense Effects of Oligonucleotides Complementary to the Hairpin of theLeishmaniaMini-exon RNA. Nucleosides & Nucleotides, 1999, 18, 1701-1704.	0.5	4
103	Aptamers to Nucleic Acid Structures. , 2006, , 167-190.		4
104	Interaction of a tryptophan-containing peptide with chromatin core particles. FEBS Letters, 1984, 169, 205-209.	2.8	3
105	Advances in binder identification and characterisation: the case of oligonucleotide aptamers. New Biotechnology, 2012, 29, 550-554.	4.4	3
106	Nucleic acid aptamers. Methods, 2016, 97, 1-2.	3.8	3
107	Structure and Dynamics of Peptide-Nucleic Acid Complexes.. , 1983, , 113-128.		3
108	Stacking Interactions in Oligopeptide-Nucleic Acid Complexes. Jerusalem Symposia on Quantum Chemistry and Biochemistry, 1981, , 317-330.	0.2	3

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109	Specific recognition by the tripeptide lysyl-tryptophyl-Î±-lysine of structural damage induced in DNA by platinum derivatives. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 1985, 825, 353-359.	2.4	2
110	A functional selection of viral genetic elements in cultured cells to identify hepatitis C virus RNA translation inhibitors. Nucleic Acids Research, 2008, 36, e95-e95.	14.5	2
111	Aptamers in Bordeaux 2017: An exceptional â€œmillÃ©simeâ€. Biochimie, 2018, 145, 2-7.	2.6	2
112	Inhibition of Pre-mRNA Splicing by a Synthetic Blom7Î±-Interacting Small RNA. PLoS ONE, 2012, 7, e47497.	2.5	1
113	Gel Renaturation Assay for Ribonucleases. Methods in Enzymology, 2001, 341, 113-125.	1.0	0
114	Aptamer-Mediated Nanoparticle Interactions: From Oligonucleotideâ€"Protein Complexes to SELEX Screens. Methods in Molecular Biology, 2015, 1297, 153-167.	0.9	0
115	Aptamers: Analytical Tools for Viral Components. , 2013, , 425-442.		0
116	Stacking Interactions: The Key Mechanism for Binding of Proteins to Single-Stranded Regions of Native and Damaged Nucleic Acids?. , 1985, , 263-286.		0
117	Understanding the Translation Regulatory Mechanisms to Improve the Efficiency and the Specificity of Protein Production by the Cell Factory. Cell Engineering, 1999, , 1-37.	0.4	0
118	The recA Gene Product from E. coli. Binding to Single-Stranded and Double-Stranded DNA. Jerusalem Symposia on Quantum Chemistry and Biochemistry, 1983, , 295-304.	0.2	0